DOCUMENT RESUME

ED 389 438 PS 023 798

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TITLE Early Years--Research. Papers from New Zealand Council for Educational Research Seminars on Early Childhood (December 13, 1993 and April 27, 1995).
INSTITUTION New Zealand Council for Educational Research, Wellington.
REPORT NO ISBN-0-908916-86-8
PUB DATE 95
NOTE 86p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Action Research; Case Studies; *Day Care; *Early Childhood Education; Educational Attitudes; Educational Policy; *Educational Research; Employment Patterns; Foreign Countries; Longitudinal Studies; Play; Preschool Children; Preschool Curriculum; Preschool Education; Student Attitudes; *Teacher Education
IDENTIFIERS New Zealand; Schema Theory; Sweden

ABSTRACT

This report contains six papers presented at 1993 and 1995 seminars conducted by the New Zealand Council for Educational Research. It also includes the schedules of the two seminars and a summary of a general discussion on future directions in research in early childhood education and care conducted at the 1995 seminar. They include: (1) "Working with Children before They Start School: Some Findings from Swedish Early Childhood Centres" (Ingrid Pramling); (2) "Creating Learners Who Want To Know: An Action Research Project Following a College-Based Teaching Experience" (Anne Meade and Lynne Bruce); (3) "Meeting Their Needs: Educational/Training Implications of a Collaborative Study of Playcentre Children Aged Under 2 1/2 Years" (Valerie Podmore and Liz Depree); (4) "Fitting, Not Flitting: Schema Development Seen in Some Children in the Competent Children Project" (Anne Meade); (5) "Early Childhood Teacher Education: Findings from a Longitudinal Study" (Margery Renwick and Sally Boyd); and (6) "Families, Work, and Early Childhood Education: Experiencing Change and Diversity" (Valerie N. Podmore). Each paper contains a reference list. (MDM)

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EARLY YEARS - RESEARCH

PAPERS from NZCER SEMINARS
on EARLY CHILDHOOD

13 December 1993 and 27 April 1995

Edited by Valerie N. Podmore
and Fay Swann

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
WELLINGTON
1995

New Zealand Council for Educational Research
PO Box 3237
Wellington
New Zealand

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ISBN 0-908916-86-8

Distributed by NZCER Distribution Services
PO Box 3237
Wellington
New Zealand

PREFACE

The NZCER early childhood seminars were initiated 7 years ago. They are planned to bring together people who have an interest in early childhood research, policies, and practices. Each annual seminar is intended as a forum for sharing research knowledge and concerns about early childhood issues. This publication includes papers from the sixth and seventh NZCER early childhood seminars.

The sixth seminar, held on 13 December 1993, was organised around Ingrid Pramling's visit to New Zealand. Ingrid Pramling, from the University of Göteborg in Sweden, has completed extensive research and writing on young children's learning and related teaching practice. The other papers presented at that seminar were both based on collaborative early childhood research undertaken in New Zealand. One of these projects included a research partner from the Wellington College of Education; the other study was initiated by the New Zealand Playcentre Federation and carried out jointly with NZCER.

Papers presented at the seventh NZCER early childhood seminar, held on 27 April 1995, focus on some of the early childhood work of researchers at NZCER. The first paper, based on the *Competent Children* project, provides insights on children's learning experiences. The second paper is concerned with teachers, and presents some findings from a longitudinal study of teacher education. The final paper moves on to families and wider contexts, and reports research information from the project *Employment and Childcare Arrangements Among Families*, and its extension, *Families, Work, and Education*.

At each early childhood seminar, the involvement of the participants is important. The final piece in this publication is a summary of a discussion held at the seminar on 27 April 1995. Participants exchanged views and experiences related to future directions in early childhood research.

The active participation of those who attend the NZCER early childhood seminars promotes consultative planning of research activities. The members of NZCER's early childhood education research group appreciate the widespread interest in these seminars.

Valerie Podmore
NZCER, 1995

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SEMINAR

Monday, 13 December 1993

Overseas Guest Speaker: **Professor Ingrid Pramling**
from the Department of Teacher Education at Göteborg University in Sweden

Seminar Programme

9 a.m.	Mihi
9.15 a.m.	Ingrid Pramling **Working with Children Before they Start School: Some Findings from Swedish Early Childhood Centres**
10.15 a.m.	Tea/Coffee
10.45 a.m.	Anne Meade (Director, NZCER) and Lynne Bruce (Wellington College of Education) **Creating Learners Who Want To Know: An Action Research Project Following a College-based Teaching Experience**
11.25 a.m.	Val Podmore (NZCER) and Liz Depree (Education Convenor, New Zealand Playcentre Federation) **Meeting Their Needs: Educational/Training Implications of a Collaborative Study of Playcentre Children Aged Under 2½ Years**
12.00 a.m.	Discussion
12.30 p.m.	Light lunch

WORKING WITH CHILDREN BEFORE THEY START SCHOOL

Some Findings from Swedish Early Childhood Centres

Ingrid Pramling

Department of Methodology in Teacher Education,
University of Göteborg

Background

Ever since early childhood education began to develop in Sweden 150 years ago there has been a discussion of its role in relation to schooling. The Fröbel tradition with play and activity dominated preschool (daycare and kindergarten) for more than 100 years, and partly still does (Johansson, 1992). However, in the 1950s and 60s we were strongly influenced by Gesell's descriptions of children's natural maturity, while in the 1970s-80s, the work of Piaget was emphasised as a basis for young children's learning and development. The notions play, work, and learning introduced in preschool are still central to the national programme (Socialstyrelsen, 1987).

Gesell's goal for early childhood education was to develop democratic individuals, while Fröbel and Piaget considered the child's logic-mathematical thinking as the primary objective. They all focused on general stages of development, which in most programmes resulted in an emphasis on methods, while the content was taken for granted.

Although the theoretical view of children's learning has changed in preschool, the discussion and the role of preschool in relation to schooling is continuing. Despite the forces at work in Sweden to create one national curriculum for preschool and school and the great similarity between the guidelines for each educational level today, the differences between preschool and school remain in practice. In Britain there have been similar discussions about early childhood education and formal schooling over the past 80 years, although there it is the 4- to 5-year-old (Bilton, 1993), while in Sweden it is the 6-year-old, who is the object of attention.

Preschool and school have developed from two different cultures and approaches to learning. Children's learning in preschool has been considered as an internally driven process, while learning in school has been viewed as transmitting a predefined body of knowledge to children. Teachers from these two traditions are now involved in a joint task, to develop a content and methods for the 6-year-olds now being given the opportunity to begin school in Sweden (Prop. 1990/91:115).

At the present time Sweden is in a critical position with regard to developing the school of the future concerning both content and methods (SOU, 1992:94). The committee who have worked on the new guidelines for school state that learning and development are two sides of the same phenomenon and each other's precondition and consequence. The goal of school ought to be long term and lead to developing people who create knowledge (knowledge-makers) with "a skill to formulate and work on problems, and reach own conclusions" (op. cit., p. 76). If students are to become

"knowledge-makers", school must not only offer activities with a meaningful content and in a meaningful context, but also a creative dimension in the work. Students must be given the chance to use their imaginations and powers of association in different ways.

But children's learning does not begin the day they enter school. An important foundation is already established during the preschool years. International research shows that children's experiences in preschool have long-term effects on children's later learning in school (Osborne & Millbank, 1989; Pramling, 1992; Weikart, 1989, 1992). But within preschool it is far from evident what preparing children for school involves (Pramling & Williams-Graneld, 1993). In practice, you commonly find that preschool children are either allowed to do the same things as in school, but at a simpler level, or that they are denied any preparation for school on the grounds that everything children experience is a preparation for life. Probably, as I will claim here, there is a third way to prepare for schooling.

Developmental Pedagogy

The view expressed here is that pedagogy is meant to create development in children. The development does not focus on general stages, but on a specific content of concern to the child's later schooling. Learning and development are seen as an indistinguishable process where learning is development, a change in the child's way of thinking about the surrounding world. This means that the content is given a central role in a preschool programme. It also means that it is every single child's experience that forms the foundation of and the goal for educational activities (Hundeide, 1989). This approach is also theoretically based on the assumption that people's conception, the way they distinguish, discern, experience something, is more basic in learning than knowledge and skills (Marton, 1981, 1988).

There is much debate today about developmentally appropriate programmes for young children (Cullen, 1993). To most people, this means creating a programme which fits the age-group in focus. This implies that a traditional view of child development in terms of general psychological stages is the basis for the programme. This is practised, for example, in the High/scope programme (Hohmann, *et al.*, 1979). The average "normal" child, who hardly ever exists in practice, is in focus. Another view which relates to developmental pedagogy is that, within an understanding of every phenomenon in the world around us, there is a development in terms of qualitatively different levels of understanding (Piaget, 1975). Thinking, for example, about children's development from scribbling to expressing their ideas in text (Tolshinsky-Landsman & Levin, 1985), children work through different levels of understanding of written text. To utilise this view of development in education challenges the teacher to give every child opportunities to develop to the next level of understanding. In a group of 20 preschool children, there are nearly always different levels, not least due to variations in their experience of the content at hand.

The Project - "Developing the Child's Understanding of the Surrounding World"

Aims

A 3-year project was developed on the basis of the theoretical view mentioned above. The purpose was fourfold:

(1) to develop a curriculum based on research about children's thinking;

(2) to implement the curriculum in praxis and observe and describe children's reactions;

(3) to evaluate children's development and learning in relation to the content and understanding more generally, during first 1 year, then 2 years, in preschool;

(4) to evaluate children's skills in learning the various types of subject-matter in primary school.[1]

Design and Data Collection

During the first year the focus was on developing 6 preschool teachers' competence for this specific approach to learning in preschool. This was achieved by a series of seminars on the content of interest but also by continuous supervision of their classroom practice. The curriculum was also developed during the first year. In the second year, the teachers, 3 from daycare and 3 from kindergarten, began to work according to the guidelines in the curriculum. At the beginning of the year, a total of 77 children, 5 and 6 years of age, were interviewed about their understanding of the content areas focused on in the curriculum. The 6-year-olds were interviewed a second time, at the end of the school year before transferring to primary school. Observations were continuously made in the classrooms during both the second and third years. In the third year, the children who were in the process of transferring to school were interviewed. The second interview for all children was divided into 2 parts, one focusing on the content worked on and one in which the children had first to listen to a story, *The Giving Tree* (Silverstein, 1964), and then answer questions in connection with it (Pramling, Asplund, & Klerfelt, 1993).

The data for analysis consist of 3 interviews with 77 children from the experiment group and 2 interviews with 38 children from comparable preschools in the areas. There are around 400 typewritten pages of observations and hundreds of children's drawings. The observations are narrative in character, focusing on the interaction between the teacher and the children or between the children.

The Curriculum

The curriculum focuses on phenomena in the surrounding world that are partly oriented towards the different types of subject-matter in school, but are not identical with these. In the 5 content areas that will be briefly described here, it is not a question of teaching facts to children but of developing the children's world of experience, that is, their awareness.

Within the area of reading and writing, the purpose is to make these phenomena visible to children in their world of experience. It is a question of how children characterise these skills. In what way is it possible to make the relation between written and spoken language visible, illustrate that the spoken language is divided into words, to understand the function of being able to read and write, understand what a symbol means, etc. (Dahlgren & Olsson, 1985; Dahlgren, *et al.*, 1993)? Another content is the development of children's experience of numbers and counting, which is something different from learning counting procedures. Here, the teaching is a question of understanding the meaning of numbers and its meaning in different kinds of counting (Neuman, 1987), to become aware of the function of mathematics in everyday life (Doverborg, 1987), to understand that mathematics is problem-solving (Ahlberg, 1992). A third aspect of the content is nature, for example, making children aware of what nature and the environment are, what is dead and what is living, ecological cycles,

[1] This will be done in an ongoing follow-up 2-year study (Pramling, 1993).

growth and change (Russel & Watt, 1990; Stephans, 1985). A fourth content is the world as created by human beings, which refers to the environment in time (history) and space (geography) (Furth, 1980). The fifth and last content concerns children's learning, that is, developing children's awareness of their own learning (Pramling, 1983).

Children's understanding of their own learning is a metacognitive question which has been emphasised within research about learning in recent years (Flavell, 1978; Brown, 1980; Pramling, 1987). Although researchers do not agree as to whether metacognition should be regarded as a skill, knowledge, or a way of relating oneself to the world around us, everybody agrees that the metacognitive aspect is important in learning. The guidelines for the teachers when implementing the content of the curriculum have been to work at different levels of generality, that is, with a concrete content, with understanding (the structure of the content) and with children's learning (Pramling, 1990). In relation to every level, the teacher has to detect the variation in children's ways of thinking. The teacher should also utilise a metacognitive approach by focusing children's attention on the different ways they think and support their talking about it.

Keeping the goals in mind, the teacher has to work with developing children's thinking by:

- getting children to talk and reflect;
- bringing out the variation in thinking and by focusing on their ideas as a content of teaching; and
- creating situations/milieux or giving children material based on critical aspects related to what one wants children to understand about something. These situations are based both on earlier research but on direct observations in the pre-school setting.

The Results

The study should, in the first place, be seen as descriptive in design. In other words, the results are mainly qualitative descriptions of children's different ways of thinking about the different content areas which they worked on, but also of activities in practice, which means the way the curriculum was implemented there.[2]

The children's development is described in terms of the way their thinking has changed, from a lower level to a more advanced one for every area of content. As can be seen in some examples in appendix 1, the results clearly show that children from the "experiment" group express a far more advanced understanding. Concerning aspects of nature, we can see in table 1 how children are able to relate objects illustrating an ecological cycle to each other. Children's understanding of how human beings have created society is seen in table 2. This illustrates both children's spontaneous reactions to "now and then" interpreted from pictures, but also their explanation of why society has changed. The most advanced conception is that development is due to human inventions. In table 3 we can see children's awareness of their own learning, which means whether children are aware of their learning to read, write, and count and of gaining knowledge. Awareness of counting and of solving mathematical problems we can see in tables 4, 5, and 6. Awareness of how to learn to read and write can be seen in table 7, and the children's skill in writing a letter can be seen in table 8.

Children write in more ways than the two shown in table 8, but the meaning of "letters with a message" is that they write letters which are readable for a person who knows that there is a stage during which children leave out some of the consonants, called by some researchers "writing in

[2] This cannot be dealt with here.

consonants that mimic the sounds" (Dahlgren, *et al.*, 1983). Sentences do not mean that everything needs to be correctly spelt, but they are messages that everyone can read. In some of the tables (1, 2, 5, 6, 8), answers are hierarchical, which means that only the most advanced answer is counted, while in the other tables (3, 4, and 7), children's answers can be found in more than one category.

Children's awareness is shown in their qualitatively different ways of talking about these content areas. The differences between the "experimental" group and the comparison group is often that the 5-year-olds in the first group fall into the same category as the children in the comparison group, who are about to transfer to primary school and are consequently, 1 or 2 years older.

Regarding children's skills, in this case writing and solving mathematical problems, the differences are marginal. The interesting finding is though, that children who have participated in the "experimental" activities for 2 years have not only developed their understanding but, to a larger extent, also their skills in writing and in solving mathematical problems (Pramling, forthcoming).

With reference to children's understanding of the story, it was found that the story was too difficult for preschool children. This resulted in few of the children understanding the message at a higher level of reflection. Some difference was seen, however, in that only 5 percent of the children in the comparison group understood that they could learn the meaning of the story, while 26 percent of the children in the "experiment" group did so (Pramling, op.cit.).

Discussion

Children who have participated in activities based on a phenomenographical approach to learning (Pramling, op.cit.) have once again developed better in their way of understanding a content at a more advanced level than children who have been involved in traditional preschool activities (for information about an earlier study, *see* Pramling, 1990). The same kind of results were found in a project in Western Australia (Allen, 1993). The difference between the study described here and the earlier ones is that the content is much broader, while the children who participated came from a variety of social backgrounds and their teachers had a wider range of experience.

The teachers have implemented the curriculum in their work in different ways. They have, first of all, used different kinds of themes, for example, water, trees, butterflies, houses and living, different countries, play, fairy tales, etc., that is, the 5 areas have been dealt with in a great variety of ways. In the themes, they have succeeded in integrating the 5 areas of content to a different extent. All children have worked on the 5 areas of content, but partly in different ways and, first of all, integrated in different themes. Children's answers may be considered as genuine and not as something learnt by heart, since they answer with examples referring to their specific experiences, although they all get the same questions.

The differences between the "experimental" groups are small in relation to children's development. It is, however, difficult to compare the groups because of the varying number of children in each group. What may be said, however, is that the group that seems least successful is the one where they have had the most problems due to staff reporting sick for long periods, the preschool moving to a new house, a large change in the composition of the group of children, and so on. This means that where there has been no continuity, it has been very difficult to develop children's thinking.

What conclusions of interest to the before-school programme can be drawn from the study presented here? Until a follow-up study has been conducted in school, it is hard to tell, at least if one expects these children to be better off in school. But what we have already seen is the enormous diversity of classroom settings and teachers they meet in school. And it is hard to believe that all

children would be able to keep ahead of other children in all these settings. In some of the data analysed, we have noticed differences between our "experimental" children and comparison children from the same classes in the first class in primary school when they were interviewed about the content in video films about "The Ecological Cycle" and "In Earlier Days". Even though the differences are minor, there is a clear trend towards a better understanding in the children who have been involved in the developmental pedagogical settings (Pramling & Williams-Graneld, 1994).

One could, of course, look at the preschool time as such and argue that a grounding in terms of self-confidence and self-esteem is the best kind a child can get for the future. And the observations show that children are self-confident, they ask teachers questions and argue among themselves about rules and knowledge. They have, in other words, learnt to learn by reflecting and questioning in everyday life.

To work with children's experience, which is social, emotional, cultural, and psychological all at the same time, means that the view of wholeness that has been one of the foundations of the Fröbel tradition is still sacred in preschool. Some researchers claim that learning in early years is so complex and difficult to grasp because of the view of wholeness (Halliwell, in press). But wholeness could also be viewed as the child's way of experiencing different aspects of the world around them, since the child's way of looking at different phenomena is related to psychology, emotions, knowledge, and social and cultural experience. These are all there at the same time in children's thinking.

To be able to work on a developmental pedagogical approach to children's learning in early years, teachers need to be aware of the goals, that is, what should happen with children during their time in early childhood education. They also need to have a deep understanding of the meaning of the child's world, described so well by Piaget a long time ago. Today Vygotsky (1972) seems to be the leader in education. Vygotsky has produced many interesting studies, but without a real grasp of the child's world as depicted by Piaget, teachers cannot function in the structuring of children's learning and development. And we have seen over and over again how surprised teachers become when they realise what it means to understand the child's thinking in everyday practice in preschool. We have also seen how teachers take for granted children's understanding, although very few children sometimes understand a specific content the way adults do (Pramling, Asplund, & Klerfelt, 1993).

Developing a programme in preschool means making it clear that there is both a "what" aspect and a "how" aspect in early childhood education; in other words, learning in preschool is not only a question of methods but also of content, and the foundations for learning the subject-matter in school are already established in the infant and toddler groups (Pramling,1993). Further, learning and development in early childhood education are not a question of learning and play, which can be seen in the oscillation between free play and teacher-structured tasks in preschools (Weikart,1992), but a question of utilising the elements of play in learning settings, that is, of specifically bringing out/emphasising children's own creative construction of an understanding of the surrounding world. Learning of any content at all in the early years should involve the same free flow of ideas as allowed in art and craft work. It is the flow of ideas which counts and not the "right answer".

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Appendix 1

Table 1
The Ecological Cycle

Relationships	Experimental Group Begin %	1 year %	2 years %	Comparison Group %
No relation	58	19	0	63
Animals eat each other	35	16	47	26
Decay	5	7	0	11
The cycle	1	59	53	0

Table 2
Society "Now and Then"

How society was created	Experimental group Begin %	1 year %	2 years %	Comparison group %
Spontaneous discovery	23	81	79	26
Why?				
No difference	13	2	7	16
The picture as such	25	5	0	32
Poor and rich	29	16	7	29
The needs change	21	21	29	5
People invented	13	57	57	18

Table 3
Children's Awareness of Their Own Learning

Learning	Experimental group Begin %	1 year %	2 years %	Comparison group %
To do	73	17	0	71
To read, write, and count	16	55	64	21
To know	10	24	36	8
To understand	1	3	0	0

Table 4

Why Is It Important To Count?

Reasons given	Experimental group			Comparison group
	Begin	1 year	2 years	
	%	%	%	%
Don't know	31	7	0	42
Recognise numbers	17	21	42	13
Future (adult/school)	29	33	14	26
Counting procedures	9	16	14	3
Solve everyday problems	21	40	57	18

Table 5

To Solve the Problem 3+ =7

Result	Experimental group			Comparison group
	Begin	1 year	2 years	
	%	%	%	%
Correct	29	53	73	45
Wrong	71	47	27	55

Table 6

The Problem 10-7 =

Result	Experimental group			Comparison group
	Begin	1 year	2 years	
	%	%	%	%
Correct	40	72	80	55
Wrong	60	28	20	45

Table 7

Learning To Read and Write

How children learnt	Experimental group			Comparison group
	Begin	1 year	2 years	
	%	%	%	%
Don't know	4	0	0	16
Preconditions	22	12	14	21
In school	29	33	29	31
Someone teach	52	55	43	26
Own activity	30	62	71	21

Table 8

Writing a Letter

Skill	Experimental group			Comparison group
	Begin	1 year	2 years	
	%	%	%	%
Letters with a message	9	24	13	24
Full sentence	3	9	47	8

Note

This paper was presented at the early childhood seminar held at the New Zealand Council for Educational Research, Wellington, 13 December 1993.

CREATING LEARNERS WHO WANT TO KNOW

An Action Research Project Following a College-based Teaching Experience

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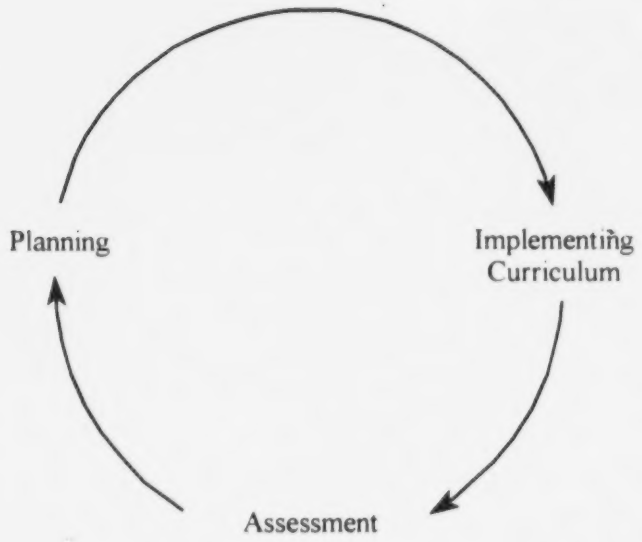
Introduction

The College-based Teaching Experience (CBTE) module is undertaken by students in the Diploma in Teaching (Early Childhood Education) course at the Wellington College of Education. The teaching-learning environment in an early childhood centre at the college becomes the total responsibility of each group of students. In 1992, I [Anne Meade] joined with two tutors from the college, Maggie Haggerty and Lynne Bruce, and 4 small groups of students to study the module using an action research framework.

The College-based Teaching Experience (CBTE) is an elective programme which:

> . . . provides students with an in-College opportunity for teaching experience in a model, practice setting. Students work in small groups to plan, implement and evaluate daily programmes for 12 three and four year old children from local early childhood settings . . . [course handout].

A major tool of assessment, unique to this module, is a set of video recordings of the children and students working together. Students, tutors, and, to a lesser extent, staff and parents from the regular centres, use the records for assessment of student practice. Under the supervision of tutors, the students take greater control of the assessment component of the teaching-learning cycle.



Each group of the 4 groups of 12 children who attend the college centre comes twice (a week apart) for a session of school-day length, accompanied by a regular staff member who steps back into an observer role unless a child becomes very distressed and needs a familiar caregiver. "Their" group of students takes responsibility for the centre and sessions.

At the time of the study, that cohort of students had completed 2 years of their 3-year training course. The module provided students with a further opportunity to practise their skills and prior experience in a setting where there was immediate feedback from the video records, their peers, and their tutors so that they could progress their learning and professional practice.

The Research

The research had 3 aims:

- To describe the tangible advantages and disadvantages for the children who attended the programme at the college centre.
- To evaluate whether the prescribed outcomes for the students doing the module were evident.
- To evaluate whether the assessment and monitoring approaches devised by the course tutors were effective from the perspective of tutors and students.

Methodology

The research methodology involved a combination of observational and questionnaire/interview approaches. Anne Meade observed and kept running record notes at planning and evaluation days, as well as during 4 of the practical days. The tutors video-taped the practical days, for research and assessment purposes. Over 32 hours of the video records were filmed of the 4 groups.

Five questionnaires/interview schedules were developed in consultation with the tutors, students, and centre staff. They were administered to:

- the children (by centre staff),
- parents of the children (by the college tutor/researchers),
- centre staff (postal questionnaire),
- students in the course (questionnaire),
- tutors.

All groups, except the children, were informed that there was a research component to the module and their consent was obtained.

Results

Only selected observational content from the videos and running records has been analysed to keep the project manageable.

Programme Variables

The students demonstrated comprehensive group planning and preparation, although in every group planning oversights were noted; for example, how to manage 12 children when those students decided to take their group into the open grounds of the college. For 2 groups, the different areas were supervised adequately; however, inadequate supervision was recorded for 2 groups on their first practical day, and tutors or centre staff needed to intervene. There was much co-operative effort in making the environment pleasing for children, and in supporting each individual student's planned experience.

There was considerable variation between groups with regard to individual planning and preparation. When some experiences did not go as planned, some students persisted against the odds, whereas others were flexible and followed the children's interests.

The researchers took particular interest in students' taking initiative. Initiative may be demonstrated via careful planning; for example, to ensure the Treaty of Waitangi "thread" was evident in their materials and behaviours throughout the practical days. Initiative is also demonstrated when situations require quick thinking. Most students were able to do this, although it was noted that students who were parents themselves were particularly good at taking this sort of initiative. Disputes between children call for foresight and/or quick action, and generally students were able to stall or manage disputes very well indeed. Another form of initiative involves judging when an activity needs to be wound up. Some students were better at this than others.

Developmentally Appropriate Practice

The research team and the students devised a list of variables related to developmentally appropriate practice to be evaluated by observational and questionnaire methods. The variables included:

- children's happiness/comfort,
- children's safety and security,
- a developmentally appropriate programme,
- a culturally appropriate programme,
- providing for individual needs,
- providing balanced and varied experiences,
- attending to the flow of the day,

- structuring the physical environment,
- non-sexist practices,
- listening to and extending language,
- using te reo Maori, and
- drawing on theory.

Generally, the data were positive in relation to these aspects of teaching practice. The questionnaire data indicate that most participants in the programmes were satisfied with the students' performance of key tasks. The motivation to provide a quality experience for the children was very high, and most weak areas on the first practical day were improved by the second. However, it would appear that many students were relying rather too much on their personal qualities and personal theories, and not enough on professional practices and theories.

The students were not strongly focused on learning outcomes in their objectives for these children and, as a consequence, the students were often not *learning*-focused in their behaviour. The teaching-learning environment, when it became the total responsibility of the students, proved to be a far more complex matter than envisaged by the students. The data showed many examples of students not planning with enough care and foresight to ensure, say, non-sexist practices.

Early childhood teachers need to be knowledgeable about a wide range of topics. The researchers saw a number of illustrations of students unable to extend children's thinking because they themselves did not have the concepts. At times, the content of activities were not appropriate for the age of the children. The final weakness was the lack of any systematic plan for the assessment of their programmes on the part of students.

Children's Emotional Health

Because the children were in a new setting with students whom they had only met once before, event sampling was recorded every time a child became upset or angry. It was found that there was a very low incidence of "negative affect" behaviours. This was explained in terms of the selection of confident children (which regular staff undertook), the positive "group culture" in the regular centres, and the thoughtfulness of the students.

Interview and Questionnaire Data

The instruments were framed to fit the 3 research objectives listed above, to do with: the children, outcomes for students, and assessment and monitoring.

The data suggested that no *children* were markedly disadvantaged by their college experiences. Those children who showed early signs of insecurity came back the following week and ran in showing pleasure. Neither parents nor regular staff were unduly worried about any small behavioural changes. The criticism made by a minority of parents and some regular staff was about children being over-tired.

The outcomes set by the *students* for the children and for themselves were largely achieved in their view, especially by the second practical day. The tutors were not so satisfied, although they were impressed with the improvements.

All felt there were many distinct advantages about this type of teaching experience, but that many of the advantages were not fully realised. The principal reasons given for this were:

- there were too few practical days, and
- the video technology, its support, and the tutors' maximisation of it were less than optimum.

The analysis of questionnaire items highlighted 2 variables in need of considerable improvement. These were "use of te reo Maori" and "attending to the flow of the day". Other aspects that the students and their observers were less than happy about were:

- "providing for individual needs",
- "providing balanced and varied planned experiences",
- "listening and extending children's language", and
- "drawing and reflecting on theory".

Over all, the consensus was that the sessions got better as the weeks went on. As well, the review days and the parent presentation evenings were generally judged favourably.

The use of video records to *monitor* the groups and to *assess* individuals was deemed to be highly beneficial, even though the quality of the film was poor at times. The written assignments were not so successful. The standard of work was generally low, and there was little regard for theoretical explanations for the successes and shortcomings in the programmes.

Discussion and Recommendations

It became clear to participants and researchers as the module progressed that the whole was larger than the parts. There were many more learning opportunities than was first obvious. The timetable also looked deceptively light, and students who interpreted it that way disadvantaged themselves and their team members. Moreover, up to this point in time, the students had not been given such heavy responsibility, and took time to adjust to the fact, individually and collectively. For some teams, it took a while to realise they needed to bring their team skills to the fore and deliberately use them.

Incomplete prior preparation was noted in the following areas:

- team work (including facilitating discussion and handling conflict),
- researching children's background sensitively,
- legal aspects, for example, regulations, statement of desirable objectives and practices, employment contracts, and so on,
- budgeting and working within a budget,
- working with parents,
- peer, parent, and self-assessment.

As well, some aspects of programme planning and implementation were new experiences for the students, namely, attending to the flow of the day, and structuring the physical environment.

The research team concluded that the action research model was very helpful because it provided both students and tutors with unparalleled opportunities to be reflective about their practice.

The research team made *recommendations* about the running of the module in future years. For the children, it was recommended that more attention be paid to:

- minimising their tiredness,
- arranging early contact between parents and students,
- adding an additional practical day,
- adding more guidelines about those with special needs, and
- safety issues.

For the students, it was recommended that more attention be paid to:

- covering some knowledge aspects in earlier courses,
- adding another practical day,
- increasing the unit loading,
- facilitating group contracts,
- setting some required reading,
- guiding them to prioritise and comprehend the fullness of the module, and
- specifying the requirements for written work in greater detail.

In organisational terms, it was recommended that:

- many improvements be made to the use of video recordings,
- more inter-tutor moderation occur,
- communication of assessment findings to other staff in the School of Early Childhood Education be formalised and followed up, and
- parent feedback become a part of the assessment.

The tutors found that the research information had added value *vis-à-vis* their work with students. Further advantages were also evident, as the research provided valuable information about how the Diploma course as a whole was going, as the CBTE module which was studied was offered at the end of the first 2 years of the Diploma's inception. To staff, this was like a debriefing on the effectiveness of the Diploma's programme.

Follow-up in the Action Research Development Spiral

The style of the research, that is, action research, enabled staff at the college to analyse data about the knowledge, understanding, and skills students actually had with what everyone perceived them to have.

Robin McTaggart (1989) - drawing from Kurt Lewin - says "group decisions and a commitment to improvement are two important concepts in action research". He also went on to say, "those affected have primary responsibility for deciding on courses of critically informed action which seem likely to lead to improvement".

The results of the research highlighted areas of concern, some of which surprised the college staff. The action research process and results caused staff to refocus and replan components of the Diploma. These were:

- team work,
- researching children's backgrounds,
- education (early childhood) regulations, management handbook, and employment contracts,
- budgeting,
- working with parents,
- te reo Maori,
- use of language, and
- assessment - peer, parent, and self-assessment.

It appeared that many students were relying on personal qualities and personal theories (Bell, 1989), and not enough on professional practices and professional theories. The whole team in the department both:

(1) debated the research findings to decide on the continuation of the CBTE as a selected module, over 2 staff forums, and

(2) spent half a day working through the findings related to the programme.

As a consequence, the CBTE module has been confirmed and strengthened. In addition, some changes have been made to the whole Diploma programme. A year after study, the programme possesses the following:

1. Team Work/Group Planning

The staff were really surprised that no group contracts were set up by the groups of students (although several students when faced with the need to raise issues with peers said, "We should have had a contract"). This is now standard practice at the start of every new module and the first part of every teaching experience package.

Human relations modules have been extended to include a conflict resolution process, based on a model developed by Marie Bell. Staff practised it too and now use the same model with each other and students.

Learning how to facilitate group meetings and run seminar sessions is now included in at least 6 modules. In the college, staff have developed a standard process which is used in preservice and Advanced Studies for Teachers courses. In year 3, 25 percent of a 6-week teaching experience module is used to prepare and run a seminar for parents.

The translation of goals to objectives, and then into action plans, is part of years 2 and 3 "Programme Planning". As well, the year 1 and 2 "Learning Through Play" module - an integrating module - uses this cycle as a fortnightly process of practical and written work. Furthermore, the 6-week, year 3 teaching experience module is totally based on an action plan, with students keeping a diary where they must identify turning theory into practice.

2. Cultural Inclusion

"Biculturalism" is a thread in every module. Students start with a 4-day marae visit in their second week in the Diploma programme. Te reo Maori modules have been extended. Part of all play-experience modules, for example, "Blocks", include appropriate vocabulary and phrases. Each slot in te reo Maori classes now has a part that is korero Maori (immersion). Staff, every year, have staff development to enable them to integrate te reo Maori.

"Cultural diversity" is a new module involving an exchange visit of 2 days with A'oga Amata. As well, students have a day with the Samoan community, including a kava ceremony. Students provide a return visit reflecting Samoan cultural festivities.

3. Researching Children

Researching children is now included in "Human Development" and "Programme Planning" courses. The year 1 programme is based totally on planning for individual children. Also students complete an infant and toddler study over 2 years.

In their third year, students take an "Inclusive Education" module where each student follows a child who has a special educational need, and his or her family, through an Individual Developmental Plan and Programme process.

4. Regulations, Management Handbook, Employment Contracts

Employment contracts are discussed by CECUA/NZEI[1] in a student forum. The balance is covered in a year-long module on "Professional Development".

Two teaching experiences in year 2 include an assignment on administration, with students given experience in 2 different systems: kindergarten, and childcare. However, childcare administration remains a difficult area for which to provide comprehensive content, as every centre has a different administrative system. The college supplements this preservice training with subsequent "Professional Development", via a supervisors' support group and ongoing training (for those centres covered by the college's contract with the Ministry of Education).

5. Budgeting

Budgeting is only a small part of the programme. Some is done on teaching experience, and students have financial responsibilities on marae week, where they do menu planning and buying within a budget. More could be done.

6. Working with Parents

Working with parents has been identified as a major area, especially given the Government's emphasis on parents as educators. Students have a day on working with parents during their first week at the college, and it is a thread which every module has to incorporate, indeed highlight.

Since the CBTE study, a new module has been developed for year 3 students called "Parents and Issues". In addition, working with parents forms a large component of the "Community Development" module, and is included as part of a year 3 teaching experience assignment.

Curriculum modules also pick up this function. For example, in "Art", students are expected to inform parents of the developmental stages and processes in art, and to draw their attention to learning contents evident in displayed works of children's art. (Marie Bassett's visit to Reggio Emilia in Italy has enhanced our understanding of the use of art in relation to children's learning.)

7. Use of Language

Besides the video records highlighting students' weaknesses in their extension of children's language, feedback from Education Review Office reports show that language enrichment is an area of concern in relation to practising teachers.

At the college, staff running curriculum modules have picked up the challenge. The co-ordinator of the "Art" module now devotes a large proportion of time to the aesthetic development of children, and uses rich descriptive language to develop students' artistic qualities, as well as encouraging clear and specific feedback to children. There are spin-offs into all areas of learning and teaching. The use of questioning requires a fine balance which takes practice to enable children to "problem seek and problem solve". (I quote Marie Bassett in discussing Reggio Emilia.) The practice is supplemented by continual modelling by tutors.

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[1] On 1 January 1994 the Combined Early Childhood Union of Aotearoa (CECUA) amalgamated with the New Zealand Educational Institute (NZEI).

8. Assessment

Assessment is proceeding slowly. College staff believe it requires a relationship of trust, as well as development of skills, to be effective. Staff have themselves undergone a workshop with a college tutor (from another section of the college) to improve their skills in enhancing students' self-assessment when staff make tutorial visits to students on teaching experiences. Some staff have accepted the challenge to set up their own peer assessment, so that students see tutors are comfortable in the role of reflective practitioner.

Both teaching experiences in year 2 now involve a written self-assessment on how well students felt they met learning outcomes, and where they intended to go to meet their ongoing needs. Assessment continues to be a high priority for further work by staff, and tutors are writing a policy and procedure guide on "Assessment" as a consequence of the college's developing a new core policy, and of the New Zealand Qualification Authority's requirements.

9. Ongoing Research

Data collection has continued. In the CBTE module in 1993, two other areas were highlighted by tutors who undertook that round of data collection. They identified "flow of day", and "setting up a physical environment that is child-centred" as needing attention if the college is to demonstrate its ongoing commitment to improvement.

College Tutors as Reflective Practitioners (Schon, 1983)

The School of Early Childhood Teacher Education in Wellington has appreciated the sharing of insights, the in-depth discussion, and the challenges raised by the principal researcher involved in the CBTE study, along with her recommendations and strategies for the future. This was a clear example of research *for* education (Carr & Kemmis, 1986).

The early childhood staff at the Wellington College of Education have been involved in and considered 5 other recent reports which evaluate college training, from both internal and external perspectives. In late 1993, the staff of the college considered those reports, as the first step in revising their philosophy on children and their place in society. At the same time, the staff in the School of Early Childhood Teacher Education spelt out their values and beliefs in relation to teacher education.

With these foundations in place, the staff involved in the Diploma programme plan to rewrite the programme curriculum, and review most modules over the next 3 years. Those participating in this revision process will also take into account *Te Whāriki*, and the draft Matrix report on unit standards for the Diploma of Teaching (Early Childhood Education), (Carr & May, 1993). Meanwhile, college tutors have rewritten the CBTE learning outcomes to make them clearer, and continue to assess the areas of concern in the module which were revealed as issues by the research data.

Conclusions

While this paper has focused on the aspects of the College-based Teaching Experience module which needed improvement, it should be noted that the students met most of the stated objectives for the module. The large majority of students felt positive about how their team had performed the key tasks. The motivation to provide quality experiences for children was very high, and many of the weaker behaviours were improved upon. The researchers noted, in comparing the video records for day 1 and 2 for each group, that changes were significant in:

- overall supervision,
- attending to and extending the children's interests and agendas, and
- consultation and giving support within student teams

Cedric Hall (1992) has outlined the 5 features of quality education and training of adults. They are:

- learning outcomes,
- teaching-learning environments,
- the knowledge base of the subject,
- content and sequence, and
- the assessment framework.

Meade (personal communication, 1992) states that these features are also important for the education of young children. Using Hall's framework (op.cit.), the overall evaluation of the 1992 CBTE by the research team was not as positive (although some groups performed better than others) as that provided by the students. The 1992 CBTE students focused fairly exclusively on the second and fourth features (the environment, and content and sequence of sessions), but paid relatively little attention to learning outcomes, the knowledge base of some of the planned experiences provided for the children, and their assessment framework.

Katz (1977) discussed the significant importance of "congruity" in teacher education. If we expect early childhood teachers to be reflective practitioners, the tutors as trainers must also demonstrate and model their ability to reflect on their teaching. During and since the 1992 action research experience, the tutors have demonstrated that they *are* reflecting on their practice - individually and collectively - in order to improve all features of the Diploma training course, in the interests of creating learners who are keen to know more - whether these learners be student teachers or children.

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Note:

This paper was presented at the early childhood seminar held at the New Zealand Council for Educational Research, Wellington, 13 December 1993.

MEETING THEIR NEEDS

Educational/Training Implications of a Collaborative Study of Playcentre Children Aged Under 2½ Years

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Abstract

After the introduction of government funding for children aged under 2½ years attending playcentre sessions, playcentre participants initiated a collaborative pilot study focused on this age group. This national-level study was developed as a follow-up to the pilot study which was completed in 1991. The aim of the research was to investigate how to cater effectively for the needs of the children aged under 2½ years who attend playcentre sessions with their parents/caregivers and for the needs of those around them.

The study was carried out by each of the 33 regional playcentre associations. Playcentre liaison officers and centre advisers collected data at 25 percent of the playcentres from each regional association. Just over half of the playcentres were in rural areas, and roll numbers varied from 4 families to over 80 families. At each of these playcentres, a questionnaire was completed by the centre adviser in consultation with the supervisor or supervising parents, and an observation of each child aged under 2½ years was carried out during a playcentre session. The active involvement of the playcentre participants was centrally important to this study.

Most of the supervisors and co-ordinators of the 158 playcentres were quite favourable towards having younger children at playcentre sessions. They made some suggestions about education, workshops, equipment, and adult involvement with the children aged under 2½ years.

In total, 644 children aged from 1 week to 29 months were observed. Observations of younger children obstructing older ones tended to occur rarely and when adults were not located close to where the children were interacting. This finding has implications for playcentres' education programmes. In this national-level study, the most prevalent type of interaction found between older and younger children was the nurturing of children aged under 2½ years by the older children.

The place of families in playcentres, and families' need for support, were emphasised from most regions. The findings enhanced the playcentre philosophy of having mixed-age sessions which reflect a family environment.

Areas followed up subsequent to the study include the provision of safe, appropriate equipment;

other safety issues in the playcentre setting; and educational implications. Throughout the regional associations, the training has been reviewed. Inherent now in all courses offered are: mixed-age sessions, cultural awareness, and playcentre philosophy - the research has been a catalyst for many changes.

Aim

Why the Study Was Initiated

During the late 1980s, government funding was introduced for children aged under 2½ years who were at playcentres. Observed increases in the number of very young children attending playcentre sessions with their parents/caregivers, and this new funding, provided an impetus for research. In 1988 the Education Committee of the New Zealand Playcentre Federation contacted early childhood researchers at NZCER, and later developed a collaborative pilot study of playcentre children aged under 2½ years. The aim of the study was to investigate how to cater effectively for the needs of the children aged under 2½ who attend playcentre sessions and for the needs of those around them. Playcentre people decided on the focus of the research and helped develop the questionnaire and observational schedule. The pilot study focused on two regional playcentre associations: one with mainly urban, and one with mainly rural, playcentres.

As a follow-up to the pilot study which was completed in 1991 (Podmore, 1991), the Education Committee of the New Zealand Playcentre Federation initiated a collaborative national-level study. This research was planned to generate information which would be relevant to all regional associations about catering for the needs of children aged under 2½ years, and for the effect they had on the older children around them.

Method

When, Where, and How the Study Was Carried Out

The national study was carried out by each of the 33 regional playcentre associations in consultation with the Education Committee of the New Zealand Playcentre Federation and NZCER. Playcentre liaison officers and centre advisers collected data at 25 percent of the playcentres from each regional association. The participating playcentres were selected using random number tables.

Co-ordination and Collaboration: The Liaison Network

At a meeting of the Playcentre Federation's Education Committee and representatives of all the regional associations, held in Parakai in October 1991, representatives from each of the 33 regional associations participated in finalising the sampling and data collection procedures. This enabled all associations to have input into how the research was to be carried out. During the meeting, some minor adjustments were made to the observation sheets and questions that had been developed as part of the pilot study. In addition, one person from each of the 33 associations volunteered (or agreed) to co-ordinate the data collection for that region.

The Playcentres

Just over half of the playcentres were located in rural areas (80 playcentres, 51 percent), and almost half were in urban areas (78 playcentres, 49 percent). The roll numbers of the playcentres varied

considerably. One playcentre had 4 families on the roll; several playcentres had over 80 families. The number of children aged under 2½ years who were on the playcentre rolls also ranged widely from centre to centre.

Procedures

The study has two parts: firstly a questionnaire was completed by the centre advisers in consultation with the supervisor or supervising parents at each selected playcentre, and secondly an observation of each child aged under 2½ years was carried out during a playcentre session. Each centre adviser or liaison officer who gathered information from the playcentres was provided with a set of guidelines for procedures.

The data were collected at the participating playcentres within a 2-month period. The co-ordinators of the study, the centre advisers, or the liaison officers completed both the questionnaire and the observations during one visit to each playcentre. Informed consent was sought from all participating playcentres. Consent was also sought from the parent accompanying each of the children aged under 2½ years who was observed.

The questionnaire was completed with the supervisor or supervising parent before or after the playcentre session.

Findings

The Children's Experiences

In total, 644 children aged from 1 week to 29 months were observed. The young children engaged in a wide range of activities and they used both the outdoor and the indoor equipment frequently.

Activities

The activities most frequently observed among the 644 infants and toddlers were eating; cuddling or being cuddled by their own parent; sandpit play; moving, walking, or crawling; water play; and using playdough. Other activities observed quite frequently included: sitting or sleeping in a pushchair, buggy, or stroller; painting; playing on the outdoor swing; and family play.

Nurturing versus Obstructing

Older children were often observed nurturing younger children. Examples of older children nurturing or helping younger children included:

> The children are tipping water near the sandpit. A 4-year-old child is filling the younger child's (boy aged 25 months) cup with a hose. Younger child smiles.
>
> The child (boy aged 17 months) is outside at the climbing boxes with two children aged over 2½ years. An older child aged 4 years 9 months is playing peep bo with the younger child.
>
> An older child is showing a younger one (boy aged 10 months) some puzzle pieces.

> Younger child (boy aged 13 months) is in a wagon being pulled. Two older children (aged over 2½ years) are holding him and keeping him steady.

Some of the incidents where older children were nurturing younger children involved siblings:

> Family corner play. Older sister picks up younger sister (aged 21 months), carries her to bed in family play area, and pretends to feed her.

An example of an incident involving a younger child nurturing an older child was:

> Older child (aged 3 years) is being pushed in a truck by younger girl (aged 19 months), lots of chatter.

Observations of younger children obstructing older ones tended to occur rarely and when adults were not close by.

Transfer of Materials

Transfer of materials from one part of the playcentre to another by children aged under 2½ years was not an issue.

Playcentre Supervisors'/Co-ordinators' Experiences and Views

Mixed-age Sessions

Most of the supervisors and co-ordinators of the 158 playcentres were quite favourable towards having younger children at playcentre sessions. When asked specifically about the advantages of having under 2½-year-old children at playcentre sessions, the most frequent response, from 117 of the supervisors, was that social interaction could take place between older and younger children. Responses from 54 supervisors also emphasised that mixed-age grouping teaches responsibility, sharing, and tolerance:

> Older children have to be considerate of others. They're (under 2½s) a joy to have.

> Other people (become) aware of the developmental stages, caring and sharing. Older children learn to be gentle and care for younger ones. The older children like to help and protect the younger children, often giving lots of encouragement. Younger children learn from older children.

> Opportunities for all areas of development to be enhanced. Mixed-age learning for the older children, gives the opportunity for nurturing, caring, and leadership. For the younger children, role models from the older children, being cared for, access to equipment and a variety of peers - an extended family situation especially with the small family size prevalent nowadays.

Another advantage mentioned by 33 supervisors was the provision of parent support, and 24 supervisors commented that the family atmosphere was an advantage.

> . . . Good for the mothers to be together.

In addition, 21 co-ordinators or supervisors described the younger children as "fascinating".

Recommended Changes

When asked, "On what areas of development or care would the supervising adults like more help?", 40 (25 percent) of the supervisors replied that they were satisfied with the current situation:

> Not a problem with such a high adult: child ratio.
> (5 adults are rostered for each session. No more than 5 children over 2½ years attend without a parent/caregiver, and no child under 2½ years attends without a parent/caregiver).

Other playcentres identified specific areas with which they would appreciate help. The suggestions made most frequently concerned parent education and workshops, with 55 (35 percent) of the respondents spontaneously requesting more workshops, training, or guidelines relevant to catering for children aged under 2½ years.

Participation

The playcentre participants were actively involved in this research. The regional co-ordinators tended to change what they were doing as part of the process of the research:

> I have enjoyed observing these little delights immensely. I have really noticed how inquisitive they are, leaving no stone unturned in their quest to 'discover'. It certainly has helped me working with this age group in my sessions I attend.

When the findings of the study were reported back to the education team at the Playcentre Federation's annual conference in May 1993 (*see* Podmore, 1993), the Education Committee took on the challenge of implementing further changes.

Conclusions and Implementation

The findings of the study were positive and affirming. Parental involvement at sessions, and the parents' involvement with their own and other children, were affirmed as important. This is the very heart of playcentre philosophy, and one thing that has not changed since playcentres began over 50 years ago.

There was support for mixed-aged playcentre sessions which serve both families and communities. The nurturing and learning that goes on between children of different ages in a supportive environment has always been important to playcentre. We do not believe that things such as "pre-entry groups" or "4-year-old sessions" are necessary. Each child can be interacted with and extended in a mixed-age grouping, and this is possible where the ratio of adults to children is not less than 1:5.

Three main areas of concern were identified.

Equipment

There was a need for more developmentally appropriate, interesting, and safe equipment. Some suggestions included building up a toy box suitable for this age range, more small-scale and big-

muscle equipment including lower slides and painting easels, more sensory experience, mucky play, and more finger painting. Many of our centres need to look at developing a safe play area for babies.

This area is being looked at by the Federation's equipment and education teams. Awareness is being raised through national newsletters and meetings and when centre equipment checks are carried out annually. The equipment and educational needs of all ages present at sessions are being explored thoroughly through the training programmes offered.

Property

Although over 80 percent of centres were considered easy to supervise, the rest had some difficult supervision areas. This finding has implications for the design of playcentres in the future, as well as raising awareness in existing centre buildings about supervision within the present environment.

These issues are being addressed by the Federation's property team through their Associations' property support networks.

Adult Involvement and Educational Implications

For playcentre education personnel, adult involvement was a very important aspect of the research. The playcentre movement is an early childhood organisation with high parent involvement. All parents need to be supported to participate in sessions, whether the sessions are under team supervision, group supervision, or led by a supervisor and trained parent helpers.

Children under 2½ years of age must be accompanied by a parent/caregiver, therefore we needed to know how these children were being supported by other people in sessions. It was found that these children were interacting mainly with their own parents, although the adults did not see the children aged under 2½ years as the sole responsibility of the parents. Adults nearby did become involved in some quoted incidents of obstruction and transfer of materials. This points out the need for more positive adult involvement and for more parents to be trained so that the needs of these children become a group responsibility. For this to happen, we need to ensure that more workshops and relevant ongoing training are provided relating to this age group.

How has playcentre picked up on this educational need? The research has proved a catalyst for many changes in the training offered.

- During the past year, the Federation's education team of 6 members has been visiting Associations, helping them in the review and updating of their training manuals. These visits have proved very beneficial, and we have looked specifically at including the younger children in all areas of play, child development, and the role of the adult in the sessions.
- Trainees are expected to extend their knowledge of safety and health issues for this age, as well as of session layout and appropriate equipment.
- Workshop content has been extended to include this age group specifically, integrating appropriate equipment and programmes.

We have used this current, New Zealand-based research to our advantage in other ways as well.

- Recently we applied to the New Zealand Qualifications Authority to have our training reassessed. Implementation of the findings of the research has supported this application.
- As a national early childhood organisation, we get the opportunity to suggest topics for teachers' refresher courses. Our topic this year is "Free-flow play in a mixed-age early childhood setting". (This course, held in August 1994, looked at valuing the differences of infants, toddlers, and

young children in a mixed-age setting. Areas covered were observation and assessment, programme planning based on *Te Whāriki*, and the rights of all children.)

- In February 1993, Liz Depree co-presented a paper on behalf of playcentre at the World Play Summit in Melbourne. As part of this, she shared the collaborative nature of the study, presenting the findings, and looked at some of the implications and conclusions. This was a valuable opportunity to share some current New Zealand research at this international conference where over 400 people from 45 countries were represented.

On reflection, however, one of the most useful outcomes for playcentre has been the participatory nature of the research. Playcentre co-ordinators, liaison officers, supervisors, and parents were involved in collecting data, and this led to more widespread awareness of the needs of the younger children attending playcentres.

Not only has the playcentre movement's philosophy of providing for a mixed-age range of children in family-based centres been affirmed by this national study, but the active involvement of playcentre people, with the support and professionalism of NZCER, has affirmed for parents how best to meet the needs of these children.

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Note

This paper was presented at the early childhood seminar held at New Zealand Council for Educational Research, Wellington, 13 December 1993.

SEMINAR

Thursday, 27 April 1995

A seminar organised by the early childhood education research group, New Zealand Council for Educational Research

Seminar Programme

9.15 a.m.	Welcome: Dr Anne Meade, Director, NZCER	
9.30 a.m.	Anne Meade	
	Fitting or Flitting? Schema Development Seen in Some Children in the Competent Children Project	
10.00 a.m.	Discussion: Chair - Val Podmore	
10.10 a.m.	Tea/Coffee	
10.30 a.m.	Margery Renwick and Sally Boyd	
	Early Childhood Teacher Education: Some Findings from a Longitudinal Study	
11.00 a.m.	Discussion: Chair - Anne Meade	
11.10 a.m.	Val Podmore	
	Families, Work, and Early Childhood Education: Experiencing Change and Diversity	
11.40 a.m.	Discussion	
11.50 a.m.	General Discussion: Chair - Margery Renwick	
	Future Directions in Research in Early Childhood Education/Care	
12.30 p.m.	Light lunch	Publications Display

FITTING, NOT FLITTING

Schema Development Seen in Some Children in the Competent Children Project

Anne Meade

Director, New Zealand Council for Educational Research

Ka nui te mihi ki a koutou i tenei ra.

Introduction

Play is essential to children's learning. There have been many books written about the importance of play for young children. One by Janet Moyles divides play into 3 basic forms: physical play, intellectual play, and social/emotional play. It is the category of intellectual play which I wish to address today. I'm going to do this by describing some of the findings from the action research component of the Competent Children longitudinal research project. That part of the study focuses on 10 children aged between 4½ and 5 years of age who were fortunate enough to have their teachers (their parents and staff in their early childhood centres) tune into their exploration and thinking about mathematical and science-related schemas. Schemas are cognitive structures or forms of thought. An observer can detect patterns in the children's behaviour or in their drawings and painting, which indicate threads running through them. These threads indicate that children are trying to fit new ideas on to existing cognitive structures. Schemas are not something that are taught to children. They come to know them through play, through first-hand experiencing, and through representing their ideas in, say, their artwork.

In this project, we focused on scientific and mathematical schemas. Other research is needed to explore other types of play and other types of schemas. For example, it is very likely that children will be forming concepts about gender through exploring social relationships through role plays and recognising patterns (schemas).

Schemas

There is considerable interest in schema theory and its implications for teaching and learning in pockets of New Zealand. Pam Cubey and I decided that we would like to extend this interest in schema development by trying out a curriculum intervention in a couple of centres involved in the Competent Children project.

It was Piaget who began to talk about young children working with structures of thought as well as content of thought. Our work on schemas follows in the footsteps of work done in the United Kingdom by Chris Athey (1990) and Cathy Nutbrown (1994), who followed up on Piagetian theory about children working on forms of thought. Athey, and Nutbrown, had been working on trying to establish what structures or forms of thought preschool children are working on. Both of them found

that young children of 3 and 4 years of age follow fairly consistent pathways in their fascinations with particular structures of thought, particular schemas. They have identified the sorts of schemas young children are fascinated with and the usual progressions of interest in different structures of thought.

What we wanted to do in New Zealand was to share this information with early childhood teachers and parents, and see if we could assist the teachers to spot those schemas. The adults then nourished the children's exploration and understanding of schemas in early childhood settings and at home. Children "come to know" about schemas and concepts built from schemas.

Here are some examples of schemas to help you understand what these forms of thought might be. Athey divides schemas into two broad categories: first, static schemas; second, action schemas. There are 3 types of *static* or figurative schemas, according to Athey: they are lines, curves, and space orders. These can be seen in children's drawings, paintings, and constructions. Athey found that children progressed through their exploration of different types of lines, or different types of curves, or different types of space order configurations in a fairly consistent order. Later, but overlapping with their work on static schemas, children worked on *action* schemas. Action schemas have a dynamic component to them. Examples of action schemas are dynamic vertical (climbing up, climbing down), dynamic side to side (trying out skateboarding). The action schema may be dynamic circles - a fascination with wheels. Another fascination, or action schema, that Chris Athey observed happening often is enveloping and containing. Children wrap, put toys to bed under blankets, plant things within containers, spend a lot of time filling buckets, and so on.

I've talked about what children do in their actions in relation to action schemas. There are later progressions in children's work on these schemas which I need to draw your attention to. The children start with things that can be seen, with motor behaviours. Then they generally move on to drawing the schema or painting or constructing it. The next progression is to try out these action schemas in relation to others to see what changes happen. For example, a child may have been exploring with lines and exploring with dynamic circles. There may come a time when that child thinks "What happens when I put a line around a circle?" Then you would observe her exploring a fishing reel, casting it out, and winding it back in. She is trying to find the functional relationship between a line and a dynamic circle. She will probably come to the conclusion that when you wind a line around a circle, it gets shorter. The final progression, at the highest level, is thought in the abstract. Adults know when children have reached this level in working with schemas when they have conversations with children about action schemas without any equipment or materials around. The child can talk about the action of a fishing reel without its being physically present.

To recap: schemas are structures of thought. Children need to build those structures for thinking by playing with materials, by experiencing at first hand what happens with materials, or by figuring out what they are seeing in the world by painting it, or working it through with constructions. Their structures may be about static schema such as lines, curves, or space order relationships. The progressions also happen in relation to action schemas. Action schemas are to do with the dynamic forms of lines, of curves, and of space orders.

To come to know these schemas, which are the basic structures of their thinking, children use a variety of content matter to figure out and consolidate these schemas. Later they group these schemas into clusters to help them understand scientific and mathematical concepts.

Curriculum Change Involving Schema Development

The researchers involved in this Competent Children substudy shared what is already known about

mathematical and scientific schema development in young children in a curriculum intervention. We wanted to find out whether the knowledge of schema development and/or curriculum changes had any impact on the development of children's competencies.

The Competent Children team identified 2 early childhood centres with the characteristics of quality early childhood centres. The centres had well-trained, experienced staff who were in ongoing education and training. Their facilities and equipment were good. Programme planning was good. The centres needed to have children in the age range that we were using for the Competent Children research project, namely, 4½ to 5 years. The researchers ran a workshop for staff and a later one for parents explaining about schemas, those forms of thought which fascinate children in their preschool years. We described some of the things that children do or draw when they are fascinated with particular schemas. We asked the teachers and the parents to watch out for schemas, to record them, and to talk to one another about them.

The researchers also asked the teachers if they would think of ways to enhance their curriculum to nourish the particular schemas they observed in the children in the research project. The changes to the curriculum were in the hands of the early childhood teachers. We suggested they should try to do more to extend the children's thinking once they became aware that one or more of the children was fascinated with a particular schema. For 6 months one of the research team visited the centres and did some observations of the 10 children who had been chosen to participate in this substudy. While she was there, she chatted to the staff about what they had seen, looked at the staff records about these children to ascertain schema indicators, and read the children's profile books and wall charts about schema development. We emphasised that teachers should continue to provide the curriculum as it was, but also to add to it in a way that was appropriate for the particular schemas they observed in the children. We did not advocate, nor did the teachers practise, an increase in adult directedness. We knew of the importance of children's play, of children being given opportunities for first-hand experience, and of children being able to express their thinking in paintings, drawings, models, and constructions.

Towards the end of the children's preschooling, the researchers gathered up information about their development of competencies. This information gathering was exactly the same as for all of the children in the Competent Children longitudinal research project. We did this by observing the children, by doing a children's interview and assessment, and by talking to their teachers about competencies such as communication competency.

What did we find out?

Fitting, Not Flitting

One of the first things that we noted was that the adult's observation of children took on an additional dimension. The adults could see that often when children moved from area to area in the programme, they were adding things together to gain a better understanding of schemas. In other words, they were just not flitting from activity to activity: there was a thread running through what they were doing, and that thread was a particular form of thought. The reason why a child might be using laces to join one shoe to another, using pieces of string to tie chairs together, and drawing lots of lines is that they are thinking lines are a way of connecting different items. As lines are explored in this way, the child would be able to fit the new experience in with previous experiences that had been stored in the memory to understand the concept of connecting.

When the adults could see that these activities helped the children to build schemas, they became intrigued by the children's thinking. This was an important development for the adults. Thinking about children's thinking means that a deeper level of understanding about each individual child's development is possible. This is very satisfying professionally, and it enhances parents' attitudes toward their children.

What the teachers did when they were able to spot any schemas was to change the curriculum to nourish those schemas. Generally, the way they did this was to add some additional materials or, on occasion, arrange for some experiences which would enhance the children's understanding about those particular schemas.

I want to provide one case study of a child to illustrate what was going on for a child who was putting together a whole lot of experiences to get to understand circles, cores and radials, and dynamic circles. Paul[1] was working on both static or figurative schema and action schema in relation to circles, enclosures, and dynamic circles.

Our time-interval observations indicated Paul was using circles or enclosures in 5 out of the 15 observation periods. He chose the sandpit which was encircled by a tractor tyre in preference to the oblong-shaped sandpit. When he was 4 years 8 months, Paul spent about 5 minutes one morning, examining first one and then another roll of sellotape. At the end of that week, Paul combined his interest in circular enclosure and connection by taking advantage of the teacher's supply of additional connecting material. They knew this schema fascinated him. Paul tied a cord around one wrist, thus enclosing it. This took a considerable amount of time and effort. He then took the other end of the cord and, with the help of an adult, tied it around his other wrist (another circular enclosure) which resulted in one part of his body being connected to another. This proved to be a powerful learning experience about the state of connectiveness for hours! Another day Paul, by then 4 years and 10 months, walked around with a cardboard tube and tried to put it over a variety of items or to fit things into it (circular enclosure).

It was the action researcher, who was consciously trying to spot the schema, who noted many examples of Paul's interest in circularity:

> Paul was following the supervisor, helping to tidy the centre. He kept moving his hand in and out of a towelling elastic hair ring (a circular enclosure). He found a wheel (circle) and gave it to the supervisor.
>
> Paul moved to the sandcloth in the other room, poured sand on to the waterwheel (core and radials, and dynamic circular). He had the wheel turning well. Another child put a handful of sand on the wheel. Paul said, 'No don't help me'. He stopped at turning, got the container for pouring and refilled it. The wheel became clogged, so he put his finger in and unblocked it (dynamic circular, functional dependency).

Paul's immediate move to the source of the blockage for the wheel's rotation demonstrated his understanding of the function of the core of the wheel - this separates the inner rod and a circular enclosure to which the radials were fitted. Sand or water poured on those radials caused the wheel to turn, provided that the 2 inner circles were not restrained by friction. He got rid of the source of friction when the wheel did clog.

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[1] Paul is not his real name.

Another example:

> Paul, aged 4 years 6 months, and 2 other children were playing chasing. He had some string tied around him (circular enclosure).
>
> Paul was twirling a lasso (dynamic circular).
>
> Paul at the collage table made a crown and it placed it over 2 yellow cartons joined together (circular enclosure). After sellotaping strips of card to the larger card, he moved into another room and twirled his lasso (dynamic circular).
>
> Paul juggled a ball (dynamic circular), and tied a scarf around his head (circular enclosure) and laid [*sic*] down and slept on a cushion.

Nearly an hour later, when the researcher returned to observing Paul, she found him still working with his lasso:

> Paul was attempting to lasso a tree. He threw it around the tree several times, rotating it before throwing it (dynamic circular, functional dependency). He threw it on top of the fort, and then on to the verandah railing.

In his work with this trajectory schema - an action schema where an object moves through space - Paul had found out or knew from watching television that rotating a lasso helped it build up speed. This schema, or co-ordination of schemas, was still fascinating Paul a month later.

> Paul, now aged 4 years and 8 months, was swinging a rope around attempting to throw a rope over the branch of a tree (dynamic circular, trajectory).

Later that day, the action researcher became involved in another of his experiments with dynamic circular schema. She supported and nourished his schema.

> Paul took a length of wood and returned to the outside playground. He tied the rope to the grid and I helped secure it to a tree. He swung backwards and forwards, side to side, and round and round (dynamic circular). I used words to describe his movements.

Paul's parents completed some observation records for a few days about that time, when Paul was 4 years 7½ months of age. On the first day, they noted that he had drawn "a painting with circular shapes - said it was a fire hose". A day later, they recorded that Paul had built a "pin-wheel, special machine out of a shoe box, with pins forming a circular protrusion out of the side and stuck out of the top" (circular).

The teachers' anecdotal observations were also littered with examples of Paul's fascination with circles and dynamic circular. The notes are very brief. However, it is interesting to note, that at age 4 years 4 months, on 2 separate days, they noted enclosure on the schema chart they were keeping. At 4 years 5 months, they kept a painting of his for the researcher, which used a circle and radials.

About the same time, the staff noted on the schema chart that Paul had spent a period of time "holding a cape in his right hand, twirling it round and round"; 2 days later they recorded Paul twirling a poi in his right hand. In Paul's profile book, which was shared with parents, the teacher wrote that his art was mostly enclosures and dabs. And at about 4 years and 8 months, the supervisor wrote, "He has a fascination with things that go round - spiral and pieces of strings that he can twirl round" (circular dynamic). The staff, aware of this fascination (as well as with connection), provided Paul with additional suitable material to use - rope, sewing tape, string - in order to facilitate his learning around these schemas. They also took sketches of his art during this period and noted the repeated patterns relating to circular enclosure, and core and radial.

During his last interview carried out before Paul turned 5, Paul's mother described his ongoing interest in circles and radials, "In his drawings, I have seen semicircles, radials, and connection". She also said that he made things "using bottle tops to turn things on such as radios" (dynamic circular, functional dependency).

These schema explorations were dominant for months. No one captured records of Paul discussing the action schema associated with circles with any teachers. One explanation for this worrying finding could be that the adults concentrated on concrete actions and drawings in their observation notes. However, other data confirm that conversations which extend children's thinking were rare events. How then are children to be taken forward to advanced levels of thinking, namely, to abstract thinking?

What Did the Adults Do To Help the Children Fit These Schemas Together?

Several things emerged as being important. The first point is about communication with parents and teachers. In initial meetings, parents proved yet again that they are the experts about their own children. They were able to describe readily and accurately the intellectual fascinations of their children. Teachers found it harder to identify them in relation to particular children, so the more the teachers and parents talked together the more likely it would be that all adults would tune into the children's thinking.

The second point is about the importance of making a rich array of curriculum materials readily available to children. The children we observed explored a wide range of materials and created with them to construct their own learning. If the children had to wait for the adults to provide activities for exploring schemas, they would have experienced far fewer opportunities to experiment with and think about their schemas. We doubt that the adults could have been as creative as the children were in shaping their own learning. The children's powers of inventiveness when exploring threads of thinking seemed to be boundless.

The third point that we would make is that the availability of outdoor experiences seemed to be significant for children's learning. Just think back to what Paul did with lassoing, rope work, using the swing, and so on. Another point that we would like to make is about the enrichment that the adults provided for the children once they became aware of the intellectual work with schemas. The materials that they provided were appropriate for allowing children to continue to construct their own understanding of schemas. The teachers did not turn into instructors; rather they provided a greater array of materials and equipment which had some appropriate connection to the schemas the children were working on. The children often used them, once they were introduced into the programme.

The final point we would like to make is rather more critical. It is generally recognised that curriculum change involves changes in curriculum content and in the curriculum processes. The teachers in the centres were conscious of the sorts of materials and equipment which would help the

children explore their schemas. Thus, they enriched the *content of the curriculum*. However, they were less conscious of *curriculum processes* when thinking about changes to nourish the children's schemas. This is not a criticism of the schema centres only; is a criticism I would make of New Zealand early childhood centres in general. When staff think about curriculum change, they mostly focus on materials, equipment, and activities for the children. This is what I mean when I talk about a focus on curriculum content. What tends to happen is that the curriculum processes - in particular, adult-child interactions - are overlooked in planning. We saw little evidence of teachers' consciousness of adult-child interactions in their planning, implementing, and evaluation of the curriculum. Adult-child interactions were not recorded in the profile books. We noted, too, that adult-child interactions were not a feature in the observations of children that we undertook. We captured interactions between teachers and the schema children in only 28 percent of the observation periods - and most of this was fleeting contact. Because group size and the ratio of adults to children is a sensitive issue in kindergartens at the present time, we decided to analyse the kindergarten data separately from the childcare centre data. The results were that the schema children in the schema kindergarten were seen to interact with a teacher in only 14 percent of the observation periods. Target children in the schema childcare centre interacted with their teachers in 44 percent of the observation periods. The better ratio of adults to children, and the centre's organisation, both contributed to these results.

If teachers are to provide effective support for children's learning and development, they need to consider processes as well as content. The processes may include modelling attitudes and action, or engaging in language interaction. We would also argue that teachers need to include processes in their evaluation records about the effectiveness of their curriculum, that is, when undertaking observations of the children in the centre and what they gain from the programme.

It is in the area of language that our observations signal the greatest need for improvement. Conversations were rarely seen during the time-interval observations. As well, the observations we did of children working on their schemas indicated that few conversations about schemas took place. Thus, the teachers were not often helping individual children develop their verbal communication skills. In kindergartens, with their large group size, the teachers could give less time to any one child. The teachers did model language in group situations and enthused children about language by reading stories. The stories, when chosen to nourish schemas, helped the children with their thinking about those schemas. We recorded cognitive language extension - a conversation between an adult and a child about something that stretched the child's thinking - in fewer than 10 percent of the observation intervals. Our conclusions are that the goal in *Te Whāriki* (1993), under the heading of Exploration, which says, "Children will develop working theories for making sense of the living, physical, and material worlds" is in jeopardy of not being met. The schema centres are amongst the best in the Wellington region. If cognitive language extension is a rare occurrence in those centres, then it is likely there will be even fewer occurrences in other centres.

Why am I focusing on adult-child interactions? There are 2 reasons for this. The first reason is that we felt the adult-child interactions are undervalued by early childhood teachers. This was evident in the schema centres in that they were just included in many of the records kept by the staff themselves, without comment or follow-up action. I must admit that the researchers were also guilty of this. Running records kept by the researchers often focused on the children and not on the adult-child interactions. We are arguing that if adult-child interactions were brought to the front of people's consciousness, it is likely that more attention would be paid to curriculum processes to enhance children's learning opportunities.

My second reason for emphasising adult-child interactions is that these centres did have more adult-

child interactions than most other centres in the Competent Children project. And it seems to us that the positive results we gained in increased adult-child interactions were as a result of the staff in the schema centres thinking more about children working on schemas. I have recorded the benefits which were found in the development of competencies in the children in other publications (*see* Meade, 1994; Meade & Cubey, 1995). Suffice it to say that the children in the schema centres did have better scores for most competencies than children in comparable other centres. This mirrors the very positive effects that Chris Athey found when studying schemas in the Foebel Institute in London (1990). Observing and thinking about working with children's thinking about schemas, appear to have led to gains for the children. The children gained from the enriched materials and equipment. Just think how much more they could have gained if they had had more opportunity for talking their "working theories" out with a more knowledgeable adult. Cast your mind back to the example of Paul which I gave you earlier. Paul worked for over a month to refine his "working theory" about trajectories by using a lasso at varying speeds to catch different objects across different distances. While we were watching these repeated patterns of behaviour, no teacher spoke to him to help him make sense of his experiments. The evidence was there that Paul was capable of abstract thought about concepts, but the adults did not afford him the opportunities to talk his thoughts out loud and test his theories against what adults know about these matters.

The staff in the schema centres made an important shift towards attending to the forms of children's thinking, which put them ahead of most teachers in focusing on processes of children's thinking. However, there was insufficient attention paid to curriculum processes and to progressions in children's thinking.

Recently, Lilian Katz has outlined 5 perspectives on the quality of early childhood programmes (Katz, 1994). One of those perspectives is the child's perspective. Katz uses the technique of posing a series of questions from the child's point of view to make readers think about the child's perspective on quality. Interestingly, she poses a set of questions about the child's wellbeing, contributions, and feelings of belonging. They cover 3 of the aims in *Te Whāriki* (1993). She then goes on to pose some questions about whether the child is intellectually engaged and respected. She comments that adults working with young children need to do more than just keep them busy and happily occupied, or even excited. She emphasises the importance of children feeling intellectually engaged and feeling respected if they are to gain long-term positive benefits from early childhood education.

We think one of the effects of our curriculum intervention was that the adults increased their respect for children's intellectual development. However, we felt that while advances were made in engaging children intellectually, more progress could have been achieved through adult discussion in particular.

Practical Considerations

A number of people have described the practical difficulties teachers have in trying to make changes to the way adults work with children. Given low adult-child ratios and the large size of most groups, how can adults spend more time with individual children discussing the things that are fascinating them intellectually? I want to raise for teachers' consideration the idea of a key-worker system. People have suggested this as an important strategy for giving children a greater sense of emotional security in childcare centres, in particular. I would argue that this way of organising the programme has merit for nourishing children's schema development. I am not arguing that children need to work in a restricted group, I am arguing that each teacher could have a designated group of children to whom

particular attention should be given. It would be this special teacher who would do the observations on the children, who would think about the enrichment of the curriculum content to nourish the children's schema development, and who would plan improvements to the interactions between the teacher and the children. This designated teacher would take responsibility for engaging the children in discussions about their "working theories", about their schemas. If this happened, I would predict that the odds would go up that young children would answer positively that they had been intellectually engaged by the programmes they were attending. What do you think?

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Note

This paper was presented at the early childhood seminar held at the New Zealand Council for Educational Research, Wellington, 27 April 1995

EARLY CHILDHOOD TEACHER EDUCATION

Findings From a Longitudinal Study

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Introduction

This paper is based on a longitudinal research study on early childhood teacher education carried out in the 5 colleges of education and 1 faculty of education, between 1988 and 1993.[1]

The New Zealand Council for Educational Research (NZCER) received a modest grant in 1988 and 1989 from the then Department of Education to enable a researcher to establish a data base related to the introduction of the 3-year integrated training programme for early childhood training by:

- Finding out students' anticipated employment following training, that is childcare, kindergarten, or other early childhood services.
- Monitoring any changes in students' intentions during training about subsequent employment.
- Establishing the employment patterns of students in the first year after training.

The study was subsequently funded by NZCER.

Methodology

One of the researchers visited each college at the end of the first year the colleges received students. She made return visits at the end of the students' second and third years. In each case students completed a questionnaire after a group discussion. In 1991 students who had finished their training in Dunedin and Palmerston North were surveyed by postal questionnaire to ascertain their first teaching position and to comment on some of their experiences during their first year of employment. The same questionnaire was sent in subsequent years to students who had completed their 3-year training in Hamilton, Christchurch, Auckland, and Wellington.

The findings presented in this paper are, on the whole, across colleges. There were cases where different trends emerged between colleges. However, comparisons between colleges have been difficult for 3 reasons. Firstly, much of the data was qualitative and difficult to quantify. Secondly, there was a considerable difference in the size of the student intake at the 6 colleges. Thirdly, because the introduction of the course was staggered across colleges, there was a difference of 3 years between

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[1] An earlier paper based on this project, *Getting it Together*, was presented at the Early Childhood Convention in Dunedin, 1991. The full report from the study is being prepared for publication by NZCER.

when the first and third intakes began their training. In a rapidly changing educational world, differences in starting dates may also have influenced students' attitudes towards various issues.

The Sample

Table 1 shows the number of students by college who completed questionnaires in each year.

Table 1

Students Who Completed Questionnaires

	Year One N=316		Year Two N=260		Year Three N=201		Ex-students N=153	
1988	Pn Nth	44						
	Dun	28						
1989	Ham	37	Pn Nth	36				
	Chch	51	Dun	27				
1990	Akld	99	Ham	30	Pn Nth	32		
	Wgtn	57	Chch	32	Dun	8		
			Anon	3	Anon	3		
1991			Akld	81	Ham	20	Pn Nth	29
			Wgtn	51	Chch	31	Dun	20
1992					Akld	64	Ham	16
					Wgtn	43	Chch	26
1993							Akld	41
							Wgtn	21

Table 1 demonstrates the variation in sample size between colleges ranging from 28 in Dunedin to 99 in Auckland. The sample size reflects the variation in student intake by college but is not an exact indication of how many students enrolled. The researcher visited each college in the first year and, as most students were present and filled in questionnaires at the time, the initial response rate was high. This was not always so in subsequent years. The situation was compounded by the fact that in the third year those students, particularly in Dunedin, who were also undertaking a degree were not present at the college in their third year. During each year there was also a reduction in student numbers in each college, which partly, but not entirely, explains the diminishing number of completed questionnaires. In the final year of the study only 48 percent of those who had completed questionnaires as first-year students completed questionnaires as ex-students. This percentage varied by college from 71 percent of ex-Dunedin students to only 37 percent of ex-Wellington students. Those percentages were influenced by the attrition rate of students undertaking the training; the number who did not gain teaching positions in their first year; and the difficulty of tracing students when they had left the college.

Students' Prior Work in Early Childhood Centres

In their first year more than half of the students, 171 or 54 percent, said that they had worked in an early childhood centre before they started the course, often in more than 1. Students were most likely to have worked in a kindergarten (72); followed by an all-day childcare centre (51); and a playcentre (33). Smaller numbers had worked in a creche (21); a kohanga reo (16); a Pacific Island early childhood education centre (8); or sessional childcare (7). Sixty-five of these students described themselves as volunteers; 63 indicated that they were paid employees; and 30 said they were parent helpers. The remaining students fell into an "other" category which included untrained reliever, nanny trainee, and school work experience.

As such a high proportion of students had some experience of early childhood services before entering college, it was not surprising that virtually all students (80 percent) felt they knew either "a little" or "quite a bit" about early childhood training when they started the course.

Commitment to Early Childhood

In an attempt to ascertain whether students in their first year were committed to work in early childhood or would perhaps prefer to work elsewhere, we asked them to respond to a series of statements:

- Working in early childhood was my first choice of career.
- I would have preferred to train as a primary teacher.
- I would have preferred to train as a secondary teacher.
- Apart from breaks for personal reasons (e.g., travel, family), I expect to make a lifelong career in early childhood education.
- I rather "drifted" into early childhood education.
- Being a student is probably as important to me as thinking about my future as an early childhood worker.
- Had it been possible, I would have preferred to do field-based training.

The student responses across all colleges are summarised in table 2.

Table 2

Students' Commitment to Early Childhood Education

N = 316

Statement of motivation	Number of students	Percent of students
Early childhood-lifelong	199	65
Early childhood-first choice	186	60
Enjoy being a student	106	34
Drifted in	45	16
Prefer primary	32	10
Prefer field based	56	17
Prefer secondary	3	-
Total	627*	202

* This total reflects the fact that many students made more than one response.

It can be seen from table 2 that when they began their training about two-thirds of the students indicated that early childhood was their first choice of employment and that they intended to make a lifelong career in early childhood. However, a third also said that being a student was as important to them as thinking about their future as an early childhood worker. There were variations by college in the students' responses to these questions. None of these were statistically significant, but certain trends emerged.

These were:

- Students in Dunedin were the most likely to say early childhood education was their first choice of a career (75 percent). Students in Hamilton (54 percent) and Auckland (58 percent) were the least likely to say this was the case.
- Students in Dunedin were also most likely to regard early childhood education as a lifelong career (75 percent), as were students in Hamilton (70 percent). Students in Wellington (56 percent) and Auckland (61 percent) were the least likely to see it as a lifelong career.
- Students in Palmerston North were the most likely to say they rather "drifted" into early childhood education (27 percent). In Christchurch 22 percent of students also responded in this way.
- Students in Hamilton were the most likely to say they would have preferred a field-based training (27 percent), followed by Christchurch (20 percent) and Wellington (19 percent). Only 3 Dunedin students indicated this preference.
- Of the 32 students who said they would have preferred to train for primary teaching, 14 came from Auckland and 7 from Palmerston North. Several of these latter students commented that when they enrolled they had thought the course was intended to prepare students to work with children from birth to 8 years.

First- and Second-year Students Who Expected To Complete the Course of Training

At the end of their first year most students expected to complete their course. The percentage was highest in Dunedin and Palmerston North, where 89 percent of students thought they would do so, and lowest in Wellington, with 74 percent of students. Only 5 students from all colleges said they did *not* expect to complete the course, most of the remainder being at this stage "unsure". The most common explanation was financial problems. Family considerations, travel, and a wish to pursue other careers were reasons given by other students. A few students from each college said they did not like the course.

In their second year most students (88 percent) also said they expected to finish the course. The percentages by college ranged from 83 percent in Hamilton to 97 percent in Christchurch. Once again, very few students indicated that they did *not* expect to finish the course, most of the remainder being unsure.

Preferred Early Childhood Service

As stated in the introduction, a major focus of this study was to establish whether or not students at the beginning of their training had a clear idea as to which early childhood service they hoped to later be employed in, and why. Were there also services they did *not* want to work in, and why? Did their views change during training?

The majority of students in each year of their training did have a clear idea of which service they wished to work in, and in most colleges the percentage of students increased each year.

In their first year, 69 percent of students across all colleges said they had a preferred service in mind. The percentages by college are given in table 3.

Table 3

First-year Students Who Had a Clear Idea of Preferred Early Childhood Service

N = 314

College	N	%
Auckland	66	67
Hamilton	26	70
Palmerston North	34	79
Wellington	33	62
Christchurch	39	77
Dunedin	15	56
College not specified	4	...
Total	217	69*

* Denotes average percentage across all colleges.

It can be seen that there was some variation by college ranging from 56 percent in Dunedin to 79 percent in Palmerston North.

In the second year the percentage of students across the 6 colleges who said they had a preferred service had increased to 73 percent. These responses varied by college, 92 percent of Palmerston North students stating that they had a clear idea of what service they would like to work in compared with 60 percent of Hamilton students. In Christchurch and Dunedin the percentage was 78 percent; in Wellington 74 percent; and in Auckland 64 percent. By their third year, 82 percent of students across the 6 colleges said they had a preferred service. Once again there were variations by college; although the variation was less than in previous years, ranging from 74 percent in Christchurch to 84 percent in Auckland and Palmerston North.

First-year Students' Preferred Service

Of the 69 percent of students who said they had a preferred service, three-quarters, across the 6 colleges, indicated that their preferred service was a kindergarten. Once again there were variations by college as seen in table 4.

Table 4

Percentage of First-year Students with a Preferred Service, Who Preferred Kindergarten

N = 217

College	N	%
Auckland	44	67
Hamilton	15*	58
Palmerston North	29	85
Wellington	23	70
Christchurch	36**	92
Dunedin	12	80
College not specified	4	
Total	163	75***

* Hamilton students' responses to this question were significantly different from other colleges (chi sq = 3.80, p = 0.05, df = 1).

** Christchurch students' responses to this question were significantly different from other colleges (chi sq = 6.44, 0.01, df = 1).

*** Denotes average percentage across all colleges.

It can be seen from table 4 that the percentage of first-year students who said they had a preferred service and preferred kindergarten differed across colleges; ranging from 58 percent in Hamilton to 92 percent in Christchurch. It is important to stress that these percentages refer to those first-year students who said they had a preferred service in the first place. If we take the sample as a whole and look at the numbers of students who said they preferred kindergarten, the percentage is considerably lower (53 percent).

First-year Students Who Preferred Childcare

Fourteen percent or fewer of those first-year students across all colleges who said they had a preferred service, indicated that childcare would be their preferred service. The actual number of students in each case was small - Auckland (8); Hamilton (2); Palmerston North (3); Wellington (6); Christchurch (4); and Dunedin (4).

First-year Students Who Preferred Nga Kohanga Reo or Pacific Island Early Childhood Education Centres

Nga kohanga reo and Pacific Island early childhood education centres were the preferred service of a small number of first-year students. Nga kohanga reo were mentioned by 5 students in Auckland and Hamilton; 2 in Wellington and Christchurch; and none in Palmerston North and Dunedin. Pacific Island early childhood education centres were mentioned by 5 students in Wellington; 2 in Auckland and Christchurch; 1 in Hamilton and Dunedin; and none in Palmerston North.

First-year Students Who Preferred Other Early Childhood Services

Ten percent of students across the 6 colleges referred to early childhood services outside the

mainstream, for example, working as a nanny, working with children with special needs, and being an education officer.

Services Preferred by Second- and Third-Year Students

As mentioned earlier, in their second year nearly three-quarters of the students across the 6 colleges (73 percent) said they had a clear idea of which early childhood service they would like to work in when they finished their training. In their third year the percentage had increased to 82 percent. In their second and third year students who had said they had a preferred early childhood service were again asked to specify which one. Their responses by years and by colleges are summarised in tables 5 and 6. Once again it must be stressed that the percentages of students refer to those who said they had a preferred service in the first place. If the sample as a whole were looked at, the percentages preferring each service would be lower. It should also be noted that 30 (12 percent) students in their second year, and 53 (26 percent) in their third ticked more than one service, indicating that they were prepared to work in more than one setting.

Table 5

Preferred Service of Second-year Students Who Had a Preferred Service by College

N = 191

Service	Chch N=26 %	Ham N=17 %	Pn Nth N=33 %	Dun N=20 %	Akld N=51 %	Wgtn N=42 %
Kindergarten	69	71	70	80	69	88
All-day childcare	23	24	24	30	20	12
Sessional childcare	12	-	6	15	6	2
Kohanga reo	4	12	-	5	6	-
Pacific Island ECE centre	4	-	-	-	6	5
Other	15	6	18	-	10	5
Total*	127	113	118	130	117	112

* All percentages do not total to 100 as some students did not reply and others indicated more than 1 preferred service. Two students did not specify their college.

Table 6

Preferred Service of Third-year Students Who Had a Preferred Service by College

N = 162

Service	Chch N=23 %	Ham N=15 %	Pn Nth N=27 %	Dun* N=8 %	Akld N=54 %	Wgtn N=35 %
Kindergarten	83	67	100	100	67	77
All-day childcare	26	53	4	25	33	20
Sessional childcare	17	33	7	-	15	9
Kohanga reo	-	20	-	-	6	6
Pacific Island ECE centre	4	13	-	-	6	9
Family daycare	-	20	-	25	2	-
Nannying	26	20	4	13	6	9
IHC intervention	13	27	7	13	11	-
Montessori	4	13	4	-	2	-
Other	4	7	7	-	13	9
Total**	177	273	133	176	161	139

* The number of third-year Dunedin students is low because many of the intake were full-time university students in that year.

** All percentages do not total to 100 as many students selected more than 1 service. Three students did not specify their college.

We do not have sufficient information to draw any conclusions about the differences in the students' responses by college, but it is likely that the ethnic composition of the student intake has influenced students' preference for working in nga kohanga reo and Pacific Island early childhood education centres, particularly in Hamilton. It is also possible that staff at Hamilton have encouraged students to think more positively about childcare as a preferred service.

Students Who Preferred Kindergarten

For those students in each year who said they had a preferred service, the percentage preferring kindergarten remained remarkably consistent - 75 percent in years 1 and 2, and 78 percent in year 3. If the sample is looked at as a whole, that is all students regardless of whether or not they had a preferred service, the percentage preferring kindergartens is lower but it does increase with each year - 52 percent in year 1, 55 percent in year 2, and 64 percent in year 3.

Students Who Preferred Childcare

For those students in each year who said they had a preferred service, the percentage preferring childcare increased by more than 10 percent each year - 16 percent in year 1, 27 percent in year 2, and 40 percent in year 3. If the sample is looked at as a whole, that is all students regardless of whether or not they had a preferred service, the percentage preferring childcare is lower but the

percentage increase is similar - 11 percent in year 1, 20 percent in year 2, and 33 percent in year 3.

Our evidence suggests that initially approximately half of the students over all wanted to work in kindergartens and a tenth in childcare. By their third year approximately two-thirds over all were still interested in kindergarten but one-third would now like, or were prepared, to work in childcare.[2]

It is important to note that when students who had a preferred service indicated which service they had in mind a number indicated more than one. Those who initially had kindergarten in mind, continued to do so but an increasing number each year were also prepared to consider childcare.

Other Preferred Services

There were also several other early childhood services mentioned by students, for example, IHC/early intervention and Montessori.

Reasons for First-year Students' Choice

Kindergartens

There were 3 main reasons given by students who said they would prefer to work in a kindergarten, and all were by way of comparison with childcare.

1. Firstly, the better pay and conditions of service, including hours of work, "time out" between sessions, time for preparation, and holidays. Several students noted that the kindergarten salaries were still too low but at least more reasonable than childcare. Students also believed kindergartens were better equipped than childcare centres.

2. Secondly, students preferred the slightly older children in kindergartens. They also thought the narrower age range of children was easier to manage, particularly with different groups in the afternoon from the morning. They thought this arrangement was likely to allow the teacher to spend more time with individual children. Some students said they found working with older children "more of a challenge", others that they preferred them because of their more advanced language development. A few stated that they were not comfortable with infants and toddlers.

3. Thirdly, students believed kindergartens were better organised and had more structured programmes. Kindergartens were regarded as more educational and the children better disciplined. Children attended more regularly, with less coming and going. Several students referred to childcare centres as places where carers just "looked after children all day". They wanted to be involved in an "educational programme" rather than "just babysitting". Such students were likely to say they preferred to be involved with children's learning rather than to have to spend time on routine toileting and feeding, particularly the "mucky jobs".

Other aspects mentioned by a smaller number of students were that they only had experience of

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[2] The shift in student attitudes towards the possibility of working in childcare as compared with kindergarten was confirmed by Harding (1990) who looked at the career intentions of a later cohort of students at Palmerston North. However, although she found that childcare was regarded as a "viable work option" (p. 35) by an increasing number of students, they were likely to regard employment in childcare as a stopgap measure only until a kindergarten position was available because of the lower pay and less attractive working conditions in childcare.

kindergartens, so they did not know much if anything about childcare before they started training; that they thought the relationship with other trained staff in kindergarten would be more stimulating; and that they believed kindergartens provided better career opportunities.

Childcare

There were 3 main reasons given by students who preferred childcare:

1. Firstly, centres were open for longer hours. As families tended to have contact over longer periods of time, staff got to know both parents and children better. Because the relationship with parents and staff was closer, more of a family atmosphere was established.

2. Secondly, students enjoyed working with a wider age range, particularly the opportunity to work with younger children - the younger the age, the more dramatic the development.

3. Thirdly, students believed childcare provided a much needed social service for working parents, particularly lower income families, and they hope more qualified staff in the service will help change community attitudes towards childcare.

Nga Kohanga Reo and Pacific Island Early Childhood Education Centres

Students who chose nga kohanga reo or Pacific Island early childhood education centres as their preferred service did so almost exclusively because of the importance they placed on children learning and retaining the languages and cultures involved, and because of their commitment to their whanau.

Second- and Third-year Students

When second- and third-year students were questioned about their reasons for preferring a particular service, the reasons they gave were similar to those of first-year students. However, as the study progressed from 1989 to 1992, students' attitudes changed noticeably from choosing services solely because of their conditions and philosophies to being more concerned about getting a job in any service that had vacancies.

Students Who Had Changed Their Mind About a Preferred Service

In each year students were also asked if they had changed their mind about their preferred service since they had been at college.

First-year Students

Over all, about 20 percent of students across the 6 colleges had changed their mind about their preferred service since the course began, but there were differences between colleges ranging from only 4 students in Hamilton (11 percent) to 18 students in Christchurch (35 percent).

The majority of the students who said they had changed their mind had previously indicated that they would prefer to work in a kindergarten, with some being uncertain at the beginning of their training as to which service they preferred. Many of them still did prefer kindergarten, but they indicated that at least they were now prepared to consider other services, particularly childcare. Of those students who had previously thought they would like to work in a kindergarten, most indicated

that the experiences they had on the course - particularly practical, enjoyable experiences in the field - had made them realise that they could work in childcare. They also found they quite enjoyed the younger and mixed-age groups:

> At the beginning I wanted to work in a kindergarten but since then I've been posted in a day care and I really, really enjoyed it. I like having the mixed age groups and having the children for the whole day rather than the half day.
>
> I have changed my idea on childcare being dens of unhappy, deprived children. If I could not get a job in a kindergarten I would consider a job in childcare if I could have some control over policy making.
>
> I haven't changed my mind completely but I feel much more comfortable with infants and toddlers and feel I could enjoy working with them now that I have experience - very rewarding.
>
> A realisation that teachers in childcare do more teaching than I originally realised.

There was a feeling amongst some students that they were "more needed" in childcare. By having children for a longer time from an earlier age, teachers got to know parents and children better and were more influential.

One student, who originally said she wanted to work in a kindergarten, now wrote:

> I want to concentrate on special needs children and intend to (in the long term) become part of an early intervention team, in which case I see myself as going to all the centres in this capacity. This idea has built up over the year.

The students who had originally said they preferred childcare were still happy to work there but had realised they could work in either setting. They had become increasingly aware of the longer hours and less attractive working conditions of childcare.

Second- and Third-year Students

In their second year, 67 (26 percent) of students across the 6 colleges said they had changed their mind about which early childhood service they would like to work in when they had finished their training. In their third year the figure was 44 (22 percent). Students often ticked more than one category. Their responses indicate that they were now more receptive to the possibility of working in a wider range of services than had been the case when they began their training. When asked their reasons for changing their minds most second- and third-year students who were now opting for kindergarten noted that working conditions in childcare had influenced their decision. Those who were now prepared to consider childcare said they had had positive experiences in centres.

The Services for Which the Course Prepared Students

Second- and third-year students were asked to indicate whether or not their training was preparing them equally well for the various early childhood services. More than half (53 percent) of the

second-year students across all colleges believed their course was preparing them equally well for work in both kindergartens and childcare. A further 27 percent thought their training was preparing them for work in all early childhood services. Fifteen percent of students believed their course of training favoured kindergartens, and 3 percent childcare. There were some differences by college in the responses of second-year students. In particular, a higher proportion of Hamilton students than those in other colleges thought they were being prepared for all services.

The responses of third-year students are summarised by college in table 7.

Table 7

The Services for Which Third-year Students by College Thought Their Course Was Preparing Them

Services	Akld N=64 %	Ham* N=20 %	Pn Nth N=32 %	Wgtn N=43 %	Chch N=31 %	Dun N=8 %	Total N=201 %
Prepared for all services	17	15	13	33	29	25	21
Prepared equally well for kindergarten/childcare	64	55	53	51	58	63	57
Favours kindergarten	23	-	34	16	13	13	20
Favours childcare	2	15	-	9	-	-	4
No response	5	15	-	2	3	-	4
Total**	111	100	100	111	103	101	106

* Hamilton students' pattern of responses to this question were significantly different from other colleges (chi sq = 13.41, $p < 0.01$, df = 3).

** The total does not always sum to 100 percent as some third-year students chose more than 1 category. Three students did not specify their college.

It can be seen from table 7 that the overall pattern of students' responses across the 6 colleges was similar in their third year to their second year. Students were most likely to indicate that their training had prepared them equally well for both kindergarten and childcare. However, there were differences by college. Wellington students, for example, were about twice as likely to think their training had prepared them for all services compared with Auckland, Hamilton, and Palmerston North. Palmerston North students were more likely than students from other colleges to think their training favoured kindergartens. Hamilton students by comparison were significantly more likely than students at the other colleges to think that their training favoured childcare.

Students' Personal And Professional Development

In their second and third years, students were asked a series of questions about their personal and professional development during the course. In the second year, students were asked if they could identify "key events", either positive or negative, which stood out in their first or second year. They were also asked what impact the programme had had on them personally, and to comment on their professional development as an early childhood worker. In their third year, they were asked to

comment on the most successful aspects of their training, and on any things that were not done well, along with suggestions for change. As one would expect, student responses to these related issues overlapped.

We are not going to report here in detail by college on the students' responses to these questions for a number of reasons. First, the training programmes for all colleges were in their first year when we surveyed students. Now that the settling-down phase has passed, programmes have been modified and courses changed, so that data will have dated rapidly. Second, the variation in sample size by college makes it particularly inappropriate to compare the reactions of students between colleges on the basis of qualitative data derived from single questions in a questionnaire. Finally, many of the students' responses were idiosyncratic and difficult to classify. What we have been able to do, is isolate some issues raised by students which appear to be common across colleges and indicate the basis for students' judgments about their experience of programmes.

The Second Year

Key Events

Seventy percent of students across colleges identified "key" events during their first 2 years at college which influenced how they regarded their training experience. Positive comments outnumbered negative by about two to one. The positive experiences of students can be divided into 2 broad types: those concerning relationships with staff and other students, and those concerning the programme itself, particularly the content of individual courses and experience on teaching practice sections.

The attitude of staff towards students, and their professional skill and personal qualities, are obviously of crucial importance. Two students commented:

> Certain lecturers were so enthusiastic and welcoming. They gave a boost to my confidence.

> Early childhood tutors who I feel are available as friends and confidants and have noticed when I needed their help and could help them.

Of almost equal importance is the friendship and support within the group of students.

> I enjoyed the unity of Div. E. I'll certainly cry when we graduate and leave each other.

> A group of students were friendly and supportive, more so than the others. Up to the present they still are. We are all good friends, both in and out of college.

These potential relationships are there from the first day. About 20 percent of students referred to the orientation programme as being a "key event" emphasising the important of students' feeling fully welcome from the outset.

> Tutor groups were a brilliant way to get to know one tutor and a few classmates on the first day.

> The variety of social events put on to welcome students to college. A good way of meeting and talking to people.

Here as elsewhere, students emphasised the importance of practical experience in early childhood centres - opportunity to "be out there, doing what we are trained for". These experiences were more likely to be referred to than the in-college courses, although individual students singled out courses - professional studies, cultural awareness, and special needs, to give examples. Others referred to the programme as a whole, for example, the flexibility of the timetable which allowed for choice in the courses taken.

These positive experiences commonly led to increased self-awareness and confidence on the part of students, and a number of students considered their own personal development to be the key event of the first 2 years of college.

The negative events referred to by students were more wide ranging than the positive. One of the major concerns of students, namely the difficulties they had in coping with financial and accommodation problems, was largely outside the control of lecturers.

The major issue which was within the province of the lecturers was the organisation and management of the programme, referred to by about 25 percent of students across the 6 colleges. The students' comments were usually to do with timetabling which allowed for too much spare time, or with a sense that the programme was poorly organised so that students lacked direction.

Smaller numbers of students referred to the poor quality of a minority of lectures and lecturers; confusion about assessment; all students being treated like school leavers; uneven workload leading to stress when too many assignments were due at once; poor teaching practice experiences; and the isolation of the early childhood programme within the college.

Personal Development

When students referred to their personal development as a consequence of participating in the programme, they tended to focus on one or more of the following:

- their increased confidence and maturity because of the wide range of people they had met and the diverse experiences they had had;
- their improved communication skills and ability to relate to people, including increased sensitivity to the needs of others; and
- their changed attitudes towards a number of professional matters, particularly the importance of early childhood education but also a heightened awareness of cultural and equity issues.

These personal skills were an important component of the developing professional skills as described by second-year students. One of these skills was simply the concept of what it means to be a professional and to act professionally at all times. Among the most important professional skills listed by second-year students were:

- knowledge of child development and the needs of individual children;
- communication between adults and children, including the importance of adult/child language;
- programme planning;
- working with parents; and
- working with other staff.

The Third Year

By the end of their third year virtually all students felt that they had been prepared either "quite well" (53 percent) or "very well" (42 percent) for their first teaching position. When students commented

on the most successful aspects of the programme they were likely to mention one or more of the following:

- the coverage of the early childhood curriculum as a whole, or particular areas through individual courses, for example, science, music, or the language arts;
- the value of practical experience in early childhood centres;
- the way the college experience had contributed to their personal and academic development;
- their increased knowledge of child development including heightened awareness about children with special needs;
- their developing skills at working with parents and the wider community; and
- increased cultural and equity awareness.

When students suggested possible changes to programmes of training 3 topics dominated their responses. These were:

1. Specific areas of the curriculum which they either thought had not been covered adequately, or had had too much emphasis, including multicultural and bicultural components.
2. Organisational weaknesses within the programme including repetition, inadequate workload, and wasted time, leading a number of students to suggest a shorter course. Others would have liked more flexibility in choosing options.
3. The need for more practical experience in early childhood centres.

Interest in Other Occupations

During the planning stages of the project, a lecturer commented that in her experience students in training tended to have rather limited knowledge of future career options for trained early childhood workers. In our questionnaire the third-year students were asked to indicate on a set list of occupations if they thought they might be interested in any of these positions in the future. Most of the students (88 percent) said they would be interested. Their responses by occupation are summarised in table 8.

Table 8

Future Occupational Options of Third-year Students

N = 201

Occupation	N	%
Officer of the Ministry of Education	26	13
Officer of the Education Review Office	27	13
Officer of the Special Education Service	84	42
Officer of the Early Childhood Development Unit	90	45
City Council community worker	57	28
Tertiary lecturer	56	28
Educational psychologist	49	24
Educational researcher	45	22
Other	38	22
Total	472	

It is clear from table 8 that, within the options listed, students were most likely to think of future employment as an officer in the Early Childhood Development Unit or the Special Education Service. These were the first 2 choices for students across the 6 colleges with the exception of students from Hamilton. For Hamilton students the first choice was the Early Childhood Development Unit (75 percent) but this was followed by being an educational researcher (50 percent). In the other colleges fewer than a quarter of students referred to the possibility of being an educational researcher. In Christchurch only 10 percent did so.

Occupations other than those listed which students referred to included: communications counselling; social work; and youth aid and child abuse work in the police force. A few students noted that because of the shortage of jobs they would consider a range of alternative options in order to be employed.

The First Year After Training

In the year after students had completed their training we sent them a further questionnaire to find out how many were now employed in early childhood centres, and to look at their attitudes towards the course, and the training they had received. Questionnaires were sent to 170 people, of whom 153 (90 percent) replied. The first-year teachers from Dunedin were surveyed in 2 groups as those taking a B.Ed. course spent a year longer in training. What follows is an analysis of the results across the 6 colleges.

Employment of Ex-students

- 132 (86 percent) were employed in an early childhood service, and
- 21 (14 percent) were *not* employed in an early childhood service.

Present Situation for Those *Not* Working in an Early Childhood Service

The ex-students who were not working in an early childhood service gave as reasons for not doing so: continuing with a B.A. or B.Ed. programme, finding alternative work such as a school co-ordinator, the difficulty of finding work in the local area, a change of mind about working in early childhood services, and personal reasons such as a marriage breakup.

The ex-students were then asked if a job were available would they work in early childhood services in the future. Forty responded, including a number who were at present in relieving positions:

- 35 indicated they would work in an early childhood service in the future.
- 5 indicated they would not work in an early childhood service in the future.

Those Working in an Early Childhood Service

The majority of ex-students who were working in an early childhood service were working in kindergartens:

- 62 (41 percent) were working in kindergartens.
- 44 (29 percent) were working in all-day childcare.
- 13 (8 percent) were working in sessional childcare.

A number of ex-students also indicated they were relieving teachers; one of these was working in a variety of different centres and the others are included in the kindergarten figures.

Three first-year teachers were working in nga kohanga reo and 3 in Pacific Island early childhood education centres. Three were nannies. Two first-year teachers were working for an Intellectually Handicapped Centre (IHC)/early intervention and 1 was with family daycare.

Several were working part-time in more than 1 centre and a number had worked in more than 1 during the year.

Those Working in First Choice of Employment

When those who were working in an early childhood service were asked if their present job was their first choice of service, 86 (65 percent) first-year teachers replied "yes" and 46 (35 percent) "no". The 46 who were not working in their first choice of service were asked which, of a number of options, explained their situation. Their responses are listed:

- 16 had taken the first job offered to them.
- 8 had not been able to find a job in their first choice of service.
- 7 had not been able to find a job in their first choice of service in the area where they lived.
- 4 thought the working conditions in their first choice of service were not good enough (3 of these were working in a childcare centre and 1 a kindergarten).

Length of Time in Position

Most first-year teachers, 51 (39 percent), expect to stay in their present position for 1 to 2 years. Thirty (23 percent) expect to stay there for 3 to 4 years, 7 (5 percent) expect to stay for longer than 4 years, and 25 (19 percent) were unsure. However, 19 (14 percent) expect to study for less than 12 months.

General Comments About Their Job

The first-year teachers were given the opportunity to make any comments they wished about their present job. About 20 made what could be described as neutral comments, that is, they referred to such things as being a relieving teacher, or taking a position because it was close to home, and several did not make any comment. Of the remaining comments, rather more than three-quarters were positive, and about a quarter negative.

Positive Comments

At least a third of all the comments made by first-year teachers expressed their general enthusiasm for the job which they described as "excellent", "enjoyable", "rewarding", "satisfying", and "a lot of fun". The first-year teachers were challenged by the demands placed on them and the skills needed to do the job but most appeared to be coping well as shown by these comments:

> I really enjoy my work. I feel that teaching in early childhood education is what I want to do for a long time. My present job is very rewarding. I am working in a quality centre with very professional staff.

> I am finding my teaching position rewarding and challenging. I'm very happy.

Where first-year teachers were more specific about the reasons for their job satisfaction, they tended to single out their pleasure in working with children; the professional support they were receiving from working as a team with other committed staff; the challenge of putting their training into practice; the

quality of the parental and community involvement and support; the pleasant relaxed environment; and the amount of resources in their centre. They were also pleased with how much they had learnt during their first year. Some comments were specific to individual teachers, for example, one working in a Pacific Island language nest spoke of her pleasure in being able to speak using her own first language. Examples of the teachers' comments were:

> I am grateful to be working with an excellent head teacher who is most professional. I am learning so much from her valuable experience.
>
> I have found the staff and senior staff very supportive which has made it easy to transfer theory to practice.
>
> I have the help and support from parents and have found this to be fabulous especially the feedback.
>
> I prepared all the year's programme for the children putting in as much as I could of my teaching practice experiences and in-class theory practice work.
>
> My kindergarten is only 2 years old and having all the modern facilities certainly helps in the long run.

Negative Comments

Most of the negative responses were made by first-year teachers teaching in other than kindergartens, usually all-day or sessional childcare. However, it should also be noted that the positive comments made by teachers teaching in these settings outnumbered the negative. Two childcare teachers wrote, for example:

> Excellent staff. Well run centre. Lots of variety and comfortable atmosphere. Good working conditions and environment.
>
> It is excellent! I'm working with both trained and untrained staff which is interesting. My boss is really flexible and our childcare seems to run smoothly most of the time. It's tiring but I'm enjoying it.

One family daycare worker wrote:

> Excellent training sessions. Thoroughly enjoyable and I learnt heaps. Valuable support system. Hours have recently been increased because of huge project growth. Valued highly as an employee.

Most of the critical comments were about working conditions, particularly long hours and low pay, and the stress of the job. Half a dozen first-year teachers referred to problems caused by having to work for private providers, and a similar number complained of having to work alongside untrained staff or people associated with the centre who did not appreciate the professional training which the first-year teacher had just completed. Older, "tired" staff with entrenched attitudes made it difficult for a few of the younger teachers to put their own philosophy and ideas into practice. The need for retraining of such teachers was mentioned. Individual teachers referred to the problems of getting trained relievers, and to pressure from parents. Two first-year teachers employed in a kohanga reo referred to the problem of attracting trained teachers to nga kohanga reo who were also speakers of

Maori. Two or 3 first-year teachers also referred to perceived inadequacies in their training in preparing them for the particular job they now had. This was usually because they had had to assume more responsibility than might have been expected for a first-year teacher and did not feel they knew enough about administration and management. A few referred to inadequate preparation for working with specific groups of children, for example, under-2-year-olds. Examples of critical comments were:

> I am presently working in a childcare centre as supervisor. It is a high stress job - long hours and poor pay. The management committee which runs the centre have no professionalism when it comes to early childhood practices. The committee requested that I work illegally by taking children over and above our licensed number. This I rejected, of course, but have been under stress as a result.
>
> Implications that childcare is not as good as kindy. That kindy teachers are 'better'. Pay is lousy, especially when stress, 'dirt money' type situation, ruining clothes etc., considered. Importance of contact with parents, but often not enough time to do it in a relaxed manner.
>
> The hours are long. I work a full 8 hours plus travel. It works out to a 9-10 hour day. The politics within the centre I wasn't prepared for.
>
> Working in this area with untrained staff is very difficult to get them to do an appropriate service for the public.

Preparation for Work in Early Childhood Services

The ex-students, whether they were now working in an early childhood service or not, were given the opportunity to make up to 4 comments about how they thought their training had prepared them for work in early childhood education. The range of comments made by the ex-students was similar across the 6 colleges where they had trained, although there were differences in emphasis. However, these differences are difficult to quantify in qualitative data of this kind. Over all, about half of the ex-students' responses were general positive comments to the effect that their training had prepared them well for working in early childhood services:

> I believe my training contributed immensely in relation to work in early childhood education. Each course was packed with information that I am now practising.
>
> When I think about what I knew about early childhood education when I first started and what I know now - I learnt so much. Over all, I think training college prepared me as best it could. The rest of the learning comes with experience in the job.
>
> College gave me a good overview of ECE as a whole. Three years of notes are now an invaluable resource!
>
> It encouraged me to believe in ECE as a profession not just a job.
>
> I felt very confident in taking on this teaching job due to being well prepared.

Where ex-students made more specific comments they singled out one or more of the following aspects of their training which college courses had provided:

- a sound theoretical basis for practical work in centres;
- knowledge of child development and behaviour;
- practice in setting goals and programme planning;
- experience in working with a wide age range of children;
- training in working with parents;
- communication skills with children and adults;
- knowledge of services available in the community; and
- increased awareness of equity issues.

A few ex-students singled out particular courses which they had found helpful, for example, working with children with special needs.

> I am linking theory with practice and finding I have a much broader knowledge base than my 2 colleagues who trained over 5 years ago.
>
> It has given me a theoretical basis to work from. It is recognised and used by other team members who seek out information from me.
>
> Human relation classes helped me become prepared for working with a variety of people.
>
> The course has given me the knowledge and confidence to talk in a professional way with parents and staff.
>
> Staff are currently finding it difficult to work with children who are just 3. The waiting list children are beginning afternoon sessions at a younger age. This is no problem to me as I have experienced a wider age range of children through childcare in my training.

Ex-students were more likely than not to be positive in their comments, but at least a quarter of their comments were critical of aspects of their training. This was most likely to be the case with students who had trained in Hamilton and Auckland, and least likely with students who had trained in Wellington and Palmerston North. Critical comments tended to be about 3 related issues:

1. The course was too theoretical and not sufficiently practical.
2. Lecturers were out of touch with what working in an early childhood centre was really like so that they were "too enthusiastic" and had idealistic and unrealistic views of what could be achieved in a centre.
3. Students were not sufficiently well prepared for administrative and management responsibilities.

Examples of the range of comments were:

> Over all the course was really good but the administrative side could have had more coverage. Students need more practical experience in really working in a centre rather than just going on section and not being included in the staff ratio.
>
> Not nearly enough preparation or insight to the 'real working world', that is, people's attitudes, differences in training, methods of becoming pat of a team instead of being squeezed into a space they make for you.
>
> I find it very difficult to adjust to the centre's planning routines and organisation after learning very specific ideas and philosophies. Change is very slow.
>
> Training is fine except for the thoughts and actions of people with different training who work in early childhood. Students should be warned that the outside world does not want highly trained graduates. Childcare and kindergarten is NOT the same in conditions or work so cannot be lumped together. Childcare does not recognise a person's training. Too many so-called untrained experts are running things.
>
> Training gave 'the ideal' of teaching and it's been very disappointing to realise that I cannot possibly do it all according to the ideal. I can only do my best.
>
> It didn't prepare me for what it is really like - painted a rather golden picture. It was too progressive for what is operating out there in many centres.

Comments on Improving Training

Ex-students were asked if they had any suggestions as to how their training could be improved. Similar issues were raised regardless of the college where ex-students had trained, although once again the emphasis varied from college to college. Not surprisingly, there was overlap between the critical comments ex-students had already made about their training, and their views on how courses of training could be improved. Over all, about 40 percent of the comments referred to the need for more teaching practice sessions, and for courses to be more practical. Examples of practical activities were ideas and activities for mat time, for small and large groups, and for more courses on behaviour management techniques. Comments about the need for more practical experience were most likely to be made by ex-students who had trained at Palmerston North, and least likely by those trained at Hamilton.

Most of the other suggestions tended to fall into the following categories. In order of importance these were:

- Better overall planning and organisation of courses for the maximum benefit of students, with less time wasted. For some students this meant more compulsory curriculum courses rather than electives. For others it meant the re-ordering of courses, for example, courses on child health should come earlier in the course.
- More courses in specific areas. The area most commonly referred to was courses on management and administration, including how to cope with the paper work in an early childhood centre and charter development. Small groups or individual students referred to the

need for more courses in, for example, music, and illness management, and for a need for more assistance to encourage closer links between early childhood staff and parents and early childhood centres and schools.

- More emphasis on increasing students' awareness of social and political issues of relevance to early childhood.
- Recognition of students' prior learning and experiences.
- Between 10 and 15 percent of ex-students (more in Hamilton and none in Christchurch) thought there should be more emphasis on biculturalism and taha Maori.
- About 12 percent of ex-students (more in Dunedin and none in Hamilton) thought students should have more opportunity to work with a wider age range of children.
- About 5 percent of ex-students (more in Christchurch and none in Palmerston North, Auckland, or Dunedin), thought the 3-year course should be reduced in length. These teachers, and others, spoke of time wasted during the course.

Examples of the range of comments made by ex-students about ways training courses could be improved were:

> A lot more teaching experience, but this was impossible because of the large number of students and the small number of early childhood services available.
>
> I would have liked to have had more practical training workshops rather than mostly theory.
>
> Much more time in early childhood centres. More learning there than in college. More time spent on special needs, communication skills, the arts.
>
> Working with large groups, learning through play, etc. Many of the ideas are great with 5 to 8 children but are difficult to work with 20 children when you are alone.
>
> Less pointless essay work, more practical application. More tips on realistic behaviour management.
>
> More about the running of an early childhood service - administrative work, regulations, etc.
>
> There needed to be more practical administration skills. More responsibility for general administration tasks, counting rolls, enrolments, ordering, etc., on teacher education.
>
> Not enough time in other areas of the curriculum, for example, under 2s.
>
> Not preparing you for parents who only want to drop their child off and pick them up, with no other support for you or your centre. Not being made aware of certain aspects - like parents still wanting care for violently ill children.
>
> More work on the 5- to 8-year-old bracket. Preparation early primary years.

> More under-2s development. Also over 2s. That is, its physical stages. More *on child's illnesses and hygiene, contagious sicknesses. Perhaps more* electives, that is, have options for more than 2 electives. More in-depth studies of areas.
>
> I would have achieved more in te reo Maori if I had had a vocabulary and regular testing.
>
> Parent/teacher relations are just as important as child/teacher relations. We needed to have more skills in working in this area.

Conclusion

This paper is based on the experiences of students in the 5 New Zealand colleges of education and 1 faculty of eduction who undertook a 3-year course of training to work in early childhood centres. Students in 2 of the colleges, Palmerston North and Dunedin, began their training in 1988, but those in Christchurch and Hamilton did not begin until 1989, and those in Auckland and Wellington until 1990. The students' year of completion was similarly staggered, with most students from the first 2 colleges ending their preservice training in the same year that those in the last 2 colleges were beginning theirs. This is important, because not only did the students' experience differ according to the institution where they trained, but the years of training varied between colleges in a time of change both within the educational sector and the wider community.

The aim of the study was to find out students' expected employment following their training, that is, childcare, kindergarten, or other early childhood services; to monitor any changes in the students' intentions during training; and to establish where students were employed after they had completed their training. At the time the study was initiated these were important questions. Prior to 1988 students planning to work in kindergartens were trained separately from those expecting to become childcare employees, and the state took a closer interest in the supply of kindergarten teachers.

When most training programmes were integrated into a 3-year programme at a college of education important issues were: would the training programme cater equally well for all early childhood services, and would students entering the programme be committed to one or other service before they began training? If this latter position was the case, would the training experience itself encourage students to consider other options for employment within the early childhood sector?

The study clearly shows that although the college programmes were designed to prepare students for work in a range of early childhood services, at the point of entry to training the majority of students had a clear idea of which service they wished to work in, and 78 percent of these students across the 6 colleges favoured working in kindergartens when they had completed their preservice courses. This percentage remained remarkably consistent throughout their training, and at the end of the 3-year course, kindergarten was still the preferred service of the majority of students. With some variation between colleges, the training courses provided students with an opportunity to experience a wider range of services than those with which they were previously familiar and this did encourage many students to think more positively about working in services other than kindergartens. However, they were still likely to hold the view that the working conditions, hours, and pay were superior in kindergartens. On the other hand, a lack of available positions in kindergartens had led some students to seek employment in childcare.

Over all, students appeared to be committed to work in early childhood and believed that their

training prepared them well for their chosen profession. They were appreciative of the opportunity provided for their own personal development, including the skills they developed in human relations and communication, and their heightened awareness of equity issues. These are obviously important for their professional development as well as those skills which focused more specifically on early childhood programmes and child development. Most would like more practical work as part of the courses of training, including more experience in centre administration and management. Some were critical of organisational and management problems within the college programmes, particularly wasted time. When they completed their training, a high proportion of students were working in early childhood centres, most in the service of their first choice, and most expressed a high level of satisfaction with their job.

However, many changes have occurred during the 5 years of the study, and as these have had an impact on the training programmes themselves and on student attitudes towards training and employment, they too have to be acknowledged when the findings from the study are considered. Among some of the most significant changes are the ongoing monitoring and evaluation of early childhood training programmes by lecturing staff so that the programmes themselves changed during the course of our study; the development of the Bachelor of Education or similar university programmes within all colleges; the introduction of *Te Whāriki*, the new early childhood curriculum; the developing culture of accountability within the educational sector; the increase in student fees; and the tight job market. These last 3 factors have led to students in many training institutions becoming more critical of courses of training. If they are paying fees, they expect courses to satisfy their requirements and to be efficiently managed.

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Note

This paper was presented at the early childhood seminar held at the New Zealand Council for Educational Research, Wellington, 27 April 1995.

FAMILIES, WORK, AND EARLY CHILDHOOD EDUCATION

Experiencing Change And Diversity

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Introduction

Overview of the Research Project

This paper describes some of the findings of interviews we carried out with families we contacted when they had a 5-year-old child. This interview study has 2 parts:

- In 1994 we completed the study *Employment and Childcare Arrangements Among Families*, with interviews of 60 families. (Other members of the team working on that research were Theresa Sawicka, David Atmore, and Jacky Burgon.)
- We are now constructing case studies to illustrate the complexities of families' employment patterns, their use of the early childhood education and care services, and parental leave experiences. The case studies are investigating the experiences within 11 different families, and the related implications. (Theresa Sawicka and Valerie Podmore are involved in that part of the study.)

This research is now part of a wider ongoing study *Families, Work, and Education* which, in addition to the case studies, includes:

- an analysis of census data on patterns of paid work in 2-parent families (by Paul Callister - *see* Callister, 1994);
- a comprehensive literature review on aspects of parental leave polices, labour market flexibility and families, and related early childhood education/care provisions and issues (Paul Callister, Judith Galtry, and Valerie Podmore are involved in that work);
- follow-up consultations with stakeholder groups.

The report with the literature review, patterns of paid work in 2-parent families, and the case studies of 11 families, will be available later in 1995, and a further short report on the consultations will be released in mid-1996.

This paper is concerned with the interviews with families, focusing mainly on diversity and change in childcare and work arrangements.

The International Context

Europe

The European Commission Childcare Network (1990) proposed that both the provision of childcare

services and the sharing of childcare responsibilities between parents are important strategies to "increase equality in the labour market" (p.1).

Several Swedish studies have investigated parental labour force participation, and childcare policies and arrangements (Andersson & Sandqvist, 1982; Sandqvist, 1987a, 1987b, 1992). These studies provided useful comparative information as background to this research. Karin Sandqvist (1987a), who compared the sharing of childcare and household tasks in Sweden and in the U.S., found that in both countries fathers took on more responsibility for their children when the mother was in the labour force, but there was a more marked trend in Sweden for younger fathers to be more involved with their children. Karin Sandqvist discussed the changing trends in family work within their cultural and historical contexts, referring to evidence in the research literature that "Swedish fathers had a longer tradition of involvement in caring for young children" than fathers in the U.S. (Sandqvist, 1987a, p.190).

The United States

Research reports from the Families and Work Institute in the U.S. also support the importance of the interface between the early childhood care and education services, families, and the labour market. Ellen Galinsky and Dana Friedman (1993) reported that high quality, flexible childcare arrangements are associated with lower absenteeism rates and less stress among parents who are employed.

Australia

Research by Gay Ochiltree (1991) and colleagues at the Australian Institute of Family Studies investigated the employment experiences of mothers. This Australian large-scale questionnaire and interview study with mothers of 5-year-old children aimed to document mothers' reasons for working or not working, their management of home and work responsibilities, and the mothers' and children's wellbeing.

On the basis of their interviews with 728 mothers, Evelyn Greenblat and Gay Ochiltree (1993) reported that the mothers' workforce participation increased during the children's first 5 years, and the majority of the mothers who were in the paid workforce worked part time. In the first 12 months of the children's lives, 16 percent of mothers were working, but by the time the children were aged 4 years, 44 percent of the mothers were in paid work. Among the mothers who were in paid work prior to the child starting school, 16 percent reported that they had problems finding suitable childcare when they first re-entered the workforce. The main difficulty was finding childcare which met both the mother's and the child's needs. Another difficulty was in finding sufficient childcare places (although Greenblat and Ochiltree noted that less than 2 percent of the total sample mentioned this as a problem). Other ongoing problem areas included transport to and from childcare, and when there was more than 1 child in the family, time constraints. The researchers also reported that:

> It was not possible to ascertain the exact combination of care arrangements used by mothers during the pre-school years, as many mothers used a variety of formal and informal carers during this period. (Greenblat & Ochiltree, 1993, p. 46)

Another Australian study, co-ordinated by Sharne Rolfe, investigated in-depth the experiences of 10 mothers with an infant in full daycare in Melbourne. Interviews with the mothers showed that some expressed anger at having to work, and they tended to describe their financial need to work in terms of meeting their children's needs. One "saw satisfaction with the day care service as central to her

decision to work", turning down employment until she found a centre where she was happy with the quality of care (Rolfe, Lloyd-Smith, & Richards, 1991, p. 27). Nine of the 10 women were living with the child's father at the time of the interview. However, none of the women appeared to have help from her partner or a family member when trying to find an appropriate childcare centre to meet her child's need and enable her to return to paid work. The researchers found that women could not be categorised as "wanting to work" or "not wanting to work" because at times the women experienced feelings of both wanting to work and not wanting to work.

> The shifting balance between their needs may lead to changes over time, perhaps on a daily or even hourly basis. (Rolfe *et al.*, 1991, p. 30)

Rolfe *et al.* recommended using longitudinal research designs to follow through changes in women's experiences.

Australian researchers have also pointed out the need to raise "the status of the child care industry" (Petrie, 1992, p. 3). According to Petrie, this is an important step towards women's work gaining more recognition.

Aotearoa/New Zealand

In New Zealand, the Ministry of Women's Affairs (1993) reported the needs and recommendations of 1043 employees and 106 employers on family and employment issues. Two themes evident in the respondents' comments were the need for more flexibility of employers and employees, and for mutual trust.

The Ministry of Women's Affairs also held work/family seminars, and reported a follow-up survey which showed that work-force participation depends on the availability of "affordable, accessible, high quality childcare" (Ministry of Women's Affairs, 1994, p. 10).

In a study of infants and toddlers in the childcare centres of Aotearoa, we found that between 1989 and 1990 there was a marked increase in the number of children aged under 2 years attending childcare centres. Representatives of professional groups (from the education and health sectors) emphasised the need for changes in the workplace towards the provision of more adequate parental leave when young children are ill (Podmore & Craig, 1991, 1994).

There has been some recent interest in surveying New Zealand families' use of the early childhood education and care services (e.g., National Research Bureau, 1993), and in investigating families' multiple use of early childhood education and care services (New Zealand Council for Educational Research, 1987). The conclusions drawn at an NZCER seminar on "multi child care use" included: that families' demands for early childhood education services were becoming more diverse and complex, that diversification of these services should be explored, and that the "delivery of early childhood services must be flexible, and sensitive to the changing needs of families" (New Zealand Council for Educational Research, 1987, p. 30).

Anne Hendricks, Anne Meade, and Cathy Wylie, who are investigating the influences of early childhood experiences on children's competence, reported that New Zealand patterns of early childhood centre attendance are complex, and that many of their pilot study children concurrently attended more than one type of service (Hendricks & Meade with Wylie, 1993). There were "no reports of problems for children or families" who used more than one service at the same time, although several parents said they needed to be well organised (Hendricks *et al.*, 1993, p. 30).

International research has already demonstrated that high quality early childhood care and education

has educational benefits for children (Podmore, 1993, 1994a; Wylie, 1994). In New Zealand further research is warranted to document in greater depth the experiences of families who combine work or study and childcare arrangements.

Employment And Childcare Arrangements Among Families

The study *Employment and Childcare Arrangements Among Families* (Podmore, 1994) investigated parents' experiences and their views on labour force participation and childcare arrangements. That research focused on early childhood care and education arrangements, organisation of employment, and parental leave policies.

Participants were 60 families with 5-year-old children, selected randomly from 14 schools in the lower North Island. We interviewed 101 people - 59 women and 42 men. The families included:

- 41 families where both the mother and the father were interviewed;
- 7 mother-only families, and 1 father-only family;
- 1 family where the grandmother was the sole caregiver;
- 10 families with 2 parents where only the mother was available for an interview.

An in-depth interview about past and present employment and childcare arrangements was conducted with each consenting parent. In the interviews we tracked year-by-year from birth to 5 years the families' experiences of the early childhood services, and the parents' participation in paid work (and in voluntary work and study).

The interview used in the study *Employment and Childcare Arrangements Among Families* (Podmore, 1994) was designed with the intention of developing further in-depth analysis at the case study level. The interview questions were constructed as a basis from which to explore in some detail the participants' perceptions and the meanings of their experiences, and to connect these to wider social conditions and contexts.

Early Childhood Education and Care

The research showed there was high incidence of participation in the early childhood education and care services. Findings about the use of the early childhood services were:

- playgroups were attended most often when the children were under 1 year;
- playcentre and childcare centres were used more often when the children were aged 1 or 2 years;
- kindergartens were the type of service most frequently used among 4-year-olds.

Concurrent use of more than one early childhood service was relatively widespread.

The benefits of early childhood care and education for parents and children usually concerned:

- socialising and socialisation;
- learning and creative activities, which were seen as further benefits for the children.

Difficulties were most often concerned with:

- aspects of socialising;
- travel or transport to the early childhood centre; and
- fees or financial considerations.

Responsibility for Caring for the Children

Another finding was that caring for the children before they started school was primarily the responsibility of the mothers. A few fathers had this responsibility. Informal care arrangements most often involved grandparents. Mothers were often responsible for caring for their children when they were sick, before school, after school, and in the holidays. Within the 2-parent families, reading and learning activities at home were more likely to be a shared responsibility.

Parents and Paid Work

In *Employment and Childcare Arrangements Among Families* 67 percent of the women and 98 percent of the men interviewed had participated in paid work during the child's first 5 years of life. The percentage of mothers working full time increased to 19 percent by the year the children were 4 to 5 years of age.

During the child's first 12 months, 31 percent of the 58 mothers were in paid work (compared with 16 percent in Gay Ochiltree's Australian findings). When the children were aged 4 to 5 years, 47 percent of the 58 mothers were in the paid work force (somewhat similar to Gay Ochiltree's finding that by the time the children in her Australian study were aged 4 years, 44 percent of their mothers were in paid work).

Each year from the child's birth up until school entry, over a third of the fathers were working 50 hours or more per week. There was some dissatisfaction among the fathers about the hours spent in paid work.

Income was seen as the main benefit of paid work. Mothers also said that interest in the work itself and having contact with adults were benefits. Difficulties for parents who had worked during the child's first 5 years were missing out on having time with their children, time pressures, fitting in household tasks, guilt, and finding appropriate childcare.

Financial difficulties influenced many parents' views on mothers of young children working. Many participants thought fathers were obliged to be in paid work, but more than a third recommended more flexible roles within families.

In total, 47 parents had been studying during their child's first 5 years. University degree or diploma courses and courses at polytechnics were the types of courses most frequently undertaken. The number of parents who participated in study courses increased between the year the children were born and the year the children turned 5 years of age.

There was widespread involvement in voluntary work at early childhood centres, schools, in the community, at churches, sports clubs, and at Plunket and local parent support groups.

Parental Leave

There was a relatively low uptake of parental leave among mothers and fathers who were in the paid workforce the year the children were born, and many who were in casual work were not eligible.

Only 8 of the mothers took more than 1 month of leave, and only 3 mothers had any paid leave. Fathers tended to take from 2 days' up to 2 weeks' leave around the time of the birth. Only 1 father took more than 2 weeks of parental leave, only a few fathers remembered having paid parental leave, and 9 said they used their annual leave. Although some mothers were satisfied, many were dissatisfied about the amount of parental leave they had around the time of the birth.

Parents participating in *Employment and Childcare Arrangements Among Families* had a range of different recommendations on leave provisions for mothers and for fathers. Many expected that

mothers should be entitled to 1 year of leave, or "the law as it is". Fathers were expected to have a few weeks of paid leave readily available to support the mother around the time of the birth. The importance of maintaining contact with the workplace while on parental leave was emphasised. Parents expressed concern about the need for flexibility among employers and in the workplace, and about having domestic leave available for parents when their children are ill. The difficulties of employers in small businesses were pointed out in regard to parental leave policies.

The main themes evident in *Employment and Childcare Arrangements Among Families* were:

- diversity and change in families' work and childcare arrangements,
- access to early childhood education and care,
- the need for flexibility in work places,
- the impact of long hours of paid work on families,
- financial constraints on taking up parental leave, and
- gender roles.

Diversity and Change

The research design, and the random sampling procedure, led to the participation of a wide range of families in the study. Diversity of experience, and changing experiences, were themes across the 101 interviews. The most "typical" pattern during the 5 years was one of mothers moving out of and into the paid work force, sometimes several times, influenced by factors such as:

- the birth of a subsequent child or children;
- the casual, temporary, or part-time nature of their employment;
- redundancies or changing hours and pressures in the workplace for themselves or their partners;
- changes of residence, usually within New Zealand;
- fluctuations in financial circumstances;
- changes in marital status/partnership circumstances;
- the completion of educational courses.

These diverse and changing trends are illustrated further at the case study level.

Similarly, many families reported changes in the early childhood services they used from one year to the next, and a few reported several changes within a single year. The complex and multiple use of the early childhood services reported by increasing numbers of parents each year of the children's first 5 years support the conclusion from the NZCER seminar on "multi child care use" that families' demands for early childhood education services are becoming diverse and complex (New Zealand Council for Educational Research, 1987). These results are also consistent with the finding from the pilot study of the Competent Children project that parents use more than one early childhood service to expose their children to more people and activities, to fit in with their work and study schedules and other family commitments, and to meet cultural and language needs (Meade, 1994). More than one early childhood service seemed to be needed when one or both parents were moving in and out of the paid work force over time.

Access to Early Childhood Education and Care

The experiences and comments of many of the families participating in this study suggested that early childhood care and education is of benefit to children's socialisation, it provides learning and creative activities, assists with transition to school, and it is also important for the wellbeing of other family members. Over all, there were high rates of participation in early childhood care and education.

- When aged under 1 year, 38 percent of the children had participated in organised early childhood education and care arrangements.
- By 4 to 5 years of age, 98 percent of the children experienced one or more of the early childhood education and care services.

However, even with these high rates of participation, families' access to early childhood care and education services was sometimes impeded by difficulties with travel and a lack of transport, and by financial constraints. The experiences of many of these New Zealand families support the importance of having high quality early childhood education and care services which are both affordable and geographically accessible to all families.

Gender Roles

The data presented in this study on responsibility within families for the care of young children show that women were primarily responsible for most aspects of the day-to-day care. However, there were exceptions and just a few fathers and grandfathers assumed these responsibilities. Diverse opinions and experiences related to gender roles were evident throughout the report. For example, many participants believed fathers of young children were obliged to be in full-time paid work in the responsible "breadwinner" role within families, but over a third of the parents wanted more flexible arrangements within families.

Case Studies of Families: Meanings of Diversity and Change

We are investigating the main themes identified in *Employment and Childcare Arrangements Among Families* in case studies of families, which describe the meanings of aspects of work and education to families with young children. The descriptions provide illustrations, within families from a range of cultures, of the impact of present social conditions on families.

We selected the families from the larger data set using a stratified procedure to ensure that different types and patterns of work participation/employment seeking, different parental leave experiences, and different ethnic groups, were represented. Variables and categories included in the selection were: family configuration, ethnic group, patterns of paid work, parental leave, and early childhood education and care.

The 11 consenting families in this case study research are:

- 6 families with Pakeha/New Zealand European parent/s,
- 3 families with 1 or 2 Maori parents and children identified as Maori ,
- 1 Samoan family (mother and children), and
- 1 Chinese family (2 parents and children identified as Chinese).

Some Preliminary Findings on Early Childhood Care and Education

One question addressed is how does children's participation in different early childhood education and care services link to changes over time in their parents' participation in paid work and other experiences and how do parents describe the meanings of these changes for children and parents?

The 11 families had work and early childhood education/care arrangements which showed considerable diversity and change. The families include:

1. A 2-parent family where the mother participated in full-time paid work after the child turned 1 year of age. On average, the mother and father worked more than 50 hours per week. The father was in full-time paid work throughout the child's first 5 years. Both parents are self-employed in a small business. The child has 3 other siblings, and is the third-born of the 4 children in the family. She attended kindergarten from age 3 to 5 years.

2. A 2-parent family where the mother is in full-time paid work. The father, who is the main caregiver, participates in casual part-time paid work. The child attended kindergarten from 3 to 4 years of age, and kindergarten and then an independent school from 4 to 5 years. She is the second-born of 2 children.

3. A 2-parent family, where the mother participated in part-time casual work when the child was aged 1 to 5 years. From the child's birth, the father was in full-time paid work, for an average of over 60 hours per week. The child attended a playgroup overseas from age 1 to 2 years, an overseas playgroup and private kindergarten (concurrently) from 2 to 3 years, a private kindergarten and private preschool (sequentially) from 3 to 4 years, and a private preschool from 4 to 5 years. She is the second-born of 2 children.

4. A father-only family, where the father worked 30 to 35 hours per week each year after the child turned 2. The father has had custody since the child was just over 2 years of age. The child attended a childcare centre from 1 to 3 years of age, and childcare and kindergarten (concurrently) from 3 to 5 years. He is the fourth-born of 4 children.

5. A mother-only family where the mother participated in full-time paid work after her child turned 1 year of age. The mother's hours of paid work average over 50 hours per week. She had several changes in work patterns, including 1 brief redundancy when the child was aged 3 to 4 years. The child attended playcentre from 1 to 5 years, and also had a nanny from 0 to 2 years and another nanny from 3 to 5 years. He is the second-born child in a 2-child family.

6. A 2-parent family, where the mother was not in paid work during the child's first 5 years. She participated in casual part-time work after the child turned 5 years, and then moved into full-time study. The father was in paid work during the child's first 3 years, then spent some time seeking work. He resumed paid work, but was made redundant a second time, then participated in voluntary work. The year after the child turned 5 years he began a study course. The child attended a kohanga reo from birth to 1 year, a playgroup and a kohanga reo (concurrently) from 1 to 2 years, a kohanga reo between 2 and 4 years, and then moved from the kohanga reo to a state school between 4 and 5 years. She is the first-born of 3 children.

7. A family where the mother was the only adult in the household both years we interviewed and visited her. The mother was not in paid work during the child's first 6 years. The child attended a childcare centre from age 2 to 3 years, and a kohanga reo from 3 to 5 years. She is the second-born of 3 children.

8. A family where the mother was the only parent available for interviews. The mother, who did shift work, was in full-time paid work when the child was aged 1 month to 1 year, part-time

paid work (averaging 22 hours per week) from 1 to 4 years, and full-time paid work from 4 to 6 years. The child attended a Samoan language group and a kindergarten between the ages of 4 and 5 years (concurrently). He is the third-born of 4 children.

9. A family where the mother works part time and the father works full time. The mother participated in permanent part-time paid work when the child was aged 1 to 4 years. The father participated in full-time paid work throughout the child's first 5 years. The child attended a playgroup and then family daycare from birth to 1 year (sequentially), family daycare arrangements from 1 to 3 years, a playcentre and a kindergarten (sequentially) between 3 and 4 years, and a kindergarten between 4 and 5 years. He is the first-born of 2 children.

10. A 2-parent family where the mother works part time and the father full time. The mother was in part-time paid work after the child turned 2 years, with hours ranging from 12 to 30 per week. The father was in full-time work throughout the child's first 5 years. The child attended a playcentre from birth to 1 year, a playgroup from 1 to 3 years, a playcentre and a childcare centre (concurrently) from 3 to 4 years, and a playcentre from 4 to 5 years. He is the second-born of 3 children.

11. A family where both parents usually work full time. The child attended a playgroup from 1 to 3 years, and a kindergarten from 3 to 5 years. The child also had a caregiver from 1 to 4 years, and a nanny from 4 to almost 6 years. He is the second-born of 2 children.

Discussion

As in Gay Ochiltree's Australian study, the parents in this study seemed to be struggling at times to find childcare arrangements which met both their children's needs and their own needs. Mothers' needs and fathers' needs changed with each change in their work-force participation. Most were also trying to balance the needs of other siblings in the family. For some families, financial constraints had a major and fluctuating influence on their changing choices of the early childhood education services; some were affected by travel and transport difficulties; several were balancing their children's exposure to different language and cultural experiences. Some families were organising childcare around the sessional arrangements of early childhood centres, and some were trying to accommodate changes in the number of adults in the household. Further work on the case studies is in progress, and more details will be available soon on the meanings of these changes for families.

Acknowledgments

This research is supported by grants from the Foundation for Research, Science and Technology. I acknowledge gratefully the co-operation of the 14 schools, the invaluable contribution the 60 participating families made to the study, and the special input from the 11 families who are participating in the case study research.

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Note

This paper was presented at the early childhood seminar held at New Zealand Council for Educational Research, Wellington, 27 April 1995.

GENERAL DISCUSSION

Topics for Future Research

At the conclusion of the April 1995 seminar, Margery Renwick chaired a general discussion on "Future Directions in Research in Early Childhood Education and Care". The goal was to identify common issues that people would like to talk about, with an emphasis on those that could be research based.

NZCER's Suggested Topics for Future Research

Val Podmore led off with in-house thoughts on future research, developed during NZCER's early childhood research group's strategic planning session in April 1995. These are the possible topics, to be considered within the next 5 years:

1. ECE policy, as it affects learners' access, participation, and achievement.

   NZCER has an accumulating body of research information on:
   - quality,
   - access (from families' point of view),
   - multiple use of early childhood education and care, and
   - new early intervention projects, screening, and targeting.

2. Families and ECE - children's learning is holistic and influenced by both home and ECE settings.

3. Information technology - influences of new technologies on children's learning.

4. Reviewing - evaluation of reviewing processes in ECE.

5. Teachers'/early childhood educators' teaching and learning.

Val requested feedback regarding these potential topics and invited other suggestions.

Funding for Research

One participant asked whether NZCER has access to a pool of funding, enabling NZCER researchers to make a choice about what research can be done, or whether funding has to come from an outside source?

Val Podmore explained that her research on families, work, and early childhood education (discussed earlier in the seminar) was funded by the Foundation for Research, Science and Technology.

Anne Meade explained that NZCER is dependent on some additional funding for the majority of its research projects. Currently there is only one full-time early childhood researcher on the permanent staff, although a number of other staff are working on the Competent Children project, funded by a

contract with the Ministry of Education.

Policy Implications

Linda Mitchell said that it is important to be vocal about the policy implications of research currently being done. Policy issues arose from all the research discussed during the morning's seminar, for example, access to early childhood services that are appropriate for families, group size, employment conditions of staff, and staff non-contact time for planning. She stressed that it is important for NZEI and NZCER to collaborate on research. It is important to talk coherently, and to give the same message to policy makers, or the early childhood sector will continue to be subjected to the top-down reviews that have occurred since 1990.

Margaret Carr suggested that future research should continue to explore the link between early childhood policy and quality. For example, research could focus on themes that have come through during the morning session, such as those related to professional development time, key workers, and other aspects of quality.

Margery Renwick added that the 3 studies presented during the morning's seminar were very different, but all have policy implications. NZCER researchers address policy implications in individual research projects. She suggested that there is a need for an overview paper on the policy implications of a series of current New Zealand studies.

NZEI's Project on Funding and Structures

Linda Mitchell reported that NZEI is about to launch a major project to look at the funding and structures that will support aspects of high quality early childhood services. The first meeting, to be held on 28 April, is being chaired by Geraldine McDonald. Initially, there will be a review of existing structural and funding arrangements; it is hoped that there will then be support from the whole sector to look at good arrangements, in terms of what is needed from the government. Representatives from some major early childhood organisations have been invited to take part in the first meeting. There will be wider consultation with the early childhood community at a later date. The terms of reference are yet to be decided; it will probably focus on the under-5s. Margery Renwick emphasised the importance of focusing on the birth to 8-year-old age range, to get over the divide between early childhood and school; it is a pity to have a cutoff between the two.

Te Whāriki

Ferenu Ete noted that the implementation of Te Whāriki will have a strong influence on early childhood services. She asked whether Te Whāriki has its own researchers, and whether they have any contact with NZCER.

Margaret Carr replied that most of the current funding from the Ministry of Education associated with Te Whāriki is for professional development. She agreed that research related to Te Whāriki will be very important; if the implementation is done well, this represents quality and will fit in with research suggestions.

A representative from the Ministry of Education reported that a major report on Te Whāriki is being developed.

Margaret reported that there will be a project focusing on the assessment of children's experiences, to link with Te Whāriki. It will be funded by the Ministry of Education, and will be a 3-year project.

working with practitioners.

Margery Renwick suggested that there appears to be a nest of interrelated projects linked to early childhood quality factors; an overview is needed to see how they fit together.

Research on Information Technology

Kath Bennett from the Christchurch College of Education reported on her initial reaction to the suggestion to conduct research on information technology. She believed that it might be good to focus on this beginning at school level, but in the early childhood sector there had already been a great deal of overseas research on this area. She would not recommend it as a research priority for the early childhood sector in New Zealand at this time.

Margery Renwick queried whether the original suggestion had been to carry out research in a broader context, rather than focusing on computers. Val Podmore replied that it had not been discussed in great detail. During the mid- to late-'80s, there had been a study on the introduction of computers to kindergartens. The quality of software had been identified as a problem. Research could possibly focus on the influences of new technology in general - not just information technology - and how this enhances children's thinking.

NZEI's Oral History Project

Linda Mitchell reported that NZEI is currently planning 7 oral histories of women involved in early childhood unions, with Hugo Manson and another researcher. The project is being funded by a grant from the Trade Union History Group and will look at the progression of early childhood employment conditions, influences on government policy, etc. It will focus on changes in the early childhood sector from 1954 onwards, and will consider the influence of developments such as the feminist movement. Researchers are currently choosing the women who will be interviewed.

Kindergarten Associations' Project on "Client Satisfaction"

Jan Ballantyne of the New Zealand Free Kindergarten Associations reported that they are beginning a project of "client satisfaction" to provide a profile of the people using the kindergarten service, the reasons why they are using it, what they would like changed, what they are happy with, and related issues. She said that it was important to retain the diversity of choice of early childhood services and to ensure that parents are happy with the choices available. Researchers will survey parents in a range of different associations, rural, urban, large, small, and so on. Margery Renwick agreed that the strength of early childhood services is their diversity.

Doreen Launder (Education Review Office) said that it is important to try and define what is meant by quality and what the commonalities are.

Gender Issues

Paul Callister said that gender issues are important, in both paid and unpaid work. He saw this as a huge, tricky issue, worthy of research. For example, within childcare, gender roles could be studied. Margery Renwick added that this was also a big issue in schools.

A'oga Amata History Project

Fereni Ete reported that A'oga Amata representatives are working with Betty Armstrong to develop a history of A'oga Amata since 1985, from their own perspective. Fereni wondered if there might be any help available from the Ministry of Education, or NZCER. Anne Meade replied that it might be possible for NZCER researchers to help by commenting on the draft report; Fereni agreed that this would be useful. Help would be welcomed from any sources.

Effectiveness of Teacher Education

Kath Bennett said that it is crucial to do research on the effectiveness of teacher training. Margery Renwick asked what the focus of useful research on teacher education could be. She assumed that each of the colleges of education would be involved in ongoing evaluation of their own programmes.

It was pointed out that it is very difficult to evaluate what happens after students leave college, and to make the link between what people learn in college and what is taught, how they behave, their level of competence, etc. Margery asked whether there are follow-up studies of students once they leave the college.

Research on Sexual Abuse Prevention

Kath Bennett also noted that over the last few years a lot of resources have gone into kits/materials on sexual abuse prevention of children. She does not know of research in New Zealand to evaluate these materials, and wondered how to go about this. What would the research questions be? If the money being spent is being wasted, shouldn't research direct us to what should be being done? How might the current programmes be evaluated? Research from the United States has shown that some overseas programmes are having no effect on children's behaviour. Margery Renwick suggested that such research could be done in co-operation with health professionals, and not just limited to education.

Anne Meade reported that Freda Briggs had done research in South Australia in collaboration with the New Zealand Police. This was an early study of the materials and the focus that might help sexual abuse prevention work with young children, but the research would be a bit dated now. Because it was published in Australia, it was not an evaluation of New Zealand-produced resources.

Kath Bennett reported that Sue Dick in Christchurch had completed a literature review of research in this area, and said that she would be happy to distribute a copy of this to anyone interested.

The Interface Between Early Childhood and Junior School Curricula

Doreen Launder said that she would like to see research on the interface between early childhood and junior school curricula. There seems to be a wider gap emerging, due to the move in the compulsory sector towards more formalised learning. This is affecting the junior school. It has not happened - and should not happen - in the early childhood services, but there might now be a greater gap developing between different teaching styles and practices.

Conclusion

Val Podmore thanked everyone for contributing to an interesting discussion, and emphasised that NZCER is certainly interested in collaborating with other groups. She encouraged people to remain

in contact. Margery Renwick added that the seminar had been a great opportunity to have everyone come together. All present were invited to remain for lunch, and to look at the publications display.